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Digital India
Power To Empower

eAbgari p.26

eCabinet p.30

PSC-Soft p.34

DIGITAL INDIA AWARDS 2020

Page 04

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INITIATIVE

एनआईसी
NIC

Happy 2021 New year

Informatics
Volume 29 No.3, January 2021

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Editorial

Awards and recognition are vital to human endeavours, especially when it is about services to the nation. They not only help in boosting morales, but also motivate all stakeholders to learn from and draw inspiration to keep excelling in delivering superior products and services. The element of celebration and fanfare that is usually associated with every ceremony to felicitate achievers also serves as a significant milestone in itself by helping organizations to take a pause, to reflect upon the journey so far, and to get recharged with renewed zeal for continuing the ascent towards higher summits..

The Digital India Awards, a prestigious initiative of NIC, MeitY, is held once in every two years. Incepted in 2009, this initiative is to recognize the achievements of government entities in designing, developing and implementing citizen-centric digital solutions. The sixth edition of the Digital India Awards held a few days ago, is a spotlight story of this new year issue of Informatics. The issue presents an array of interesting articles. Chhattisgarh and Andhra Pradesh are the states covered this time in **From the States** section. The three award-winning districts; Changlang, Kamareddy and Khargone are exclusives in the **District Informatics**. Load Testing as a Service and Securing Mobile Apps are the features in the **Technology Update** section this time. PSC Soft-HP, eCabinet and eAbgari are the articles covered in the **e-Gov Products & Services** section. The regular sections such as **Accolades** and **In The News** bring you some useful reads.

Hope you enjoy reading this issue. Here's wishing you a very happy and prosperous New Year. Please do take care and keep healthy.

-Editor

Content

Spotlight
Digital India Awards 04

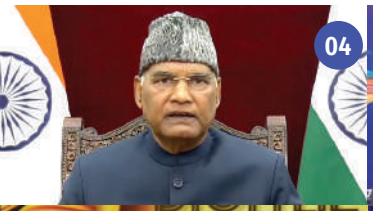
From the States
Andhra Pradesh 10
Chhattisgarh 16

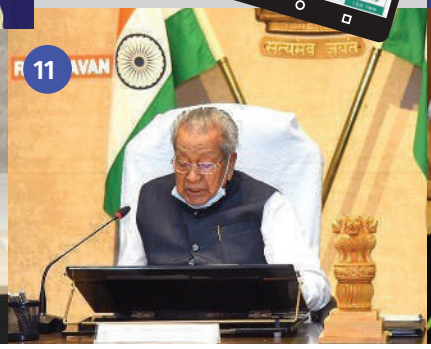
District Informatics
Changlang 20
Kamareddy 22
Khargone 24

e-Gov Products & Services
eAbgari 26
eCabinet 30
PSC Soft 34

Technology Update
Load Testing as a Service 37
Securing Mobile apps 40

Appscape 42
In the News 44
Accolades 48





The Director General's New Year Message

As we all embark on our journey to deliver the best of our abilities in 2021, it is also time that we look back and reflect on how we made an impact in 2020. It's a matter of pride for us that with over 800 offices pan India, we could partner at every level of administration and deliver a wide range of solutions and services that benefitted government as well as citizens.

At NIC, our focus has always been towards delivering the best of citizen centric services, keeping in mind on how to bring in transformational change and bridge the digital divide. With solutions focusing on various areas such as agriculture, healthcare, education, transport, visa & immigration, finance and judiciary to name a few, we are at the cusp of a digital transformation which is propelling technological innovations around us.

In 2020, although most of our new developments were focused on providing digital solutions to fight against the corona virus pandemic, we could still ensure continuity of our existing services which were directly or indirectly of immense use during the pandemic. Before the lockdown was announced, we had established our Centre of Excellence in Blockchain Technology at NIC Karnataka in our Bangalore office. The centre is an addition to our establishments of CoEs in Artificial Intelligence, Data Analytics and Microservices. These dedicated centres will truly help NICians in excelling towards adoption of emerging technologies in eGovernance solutions.

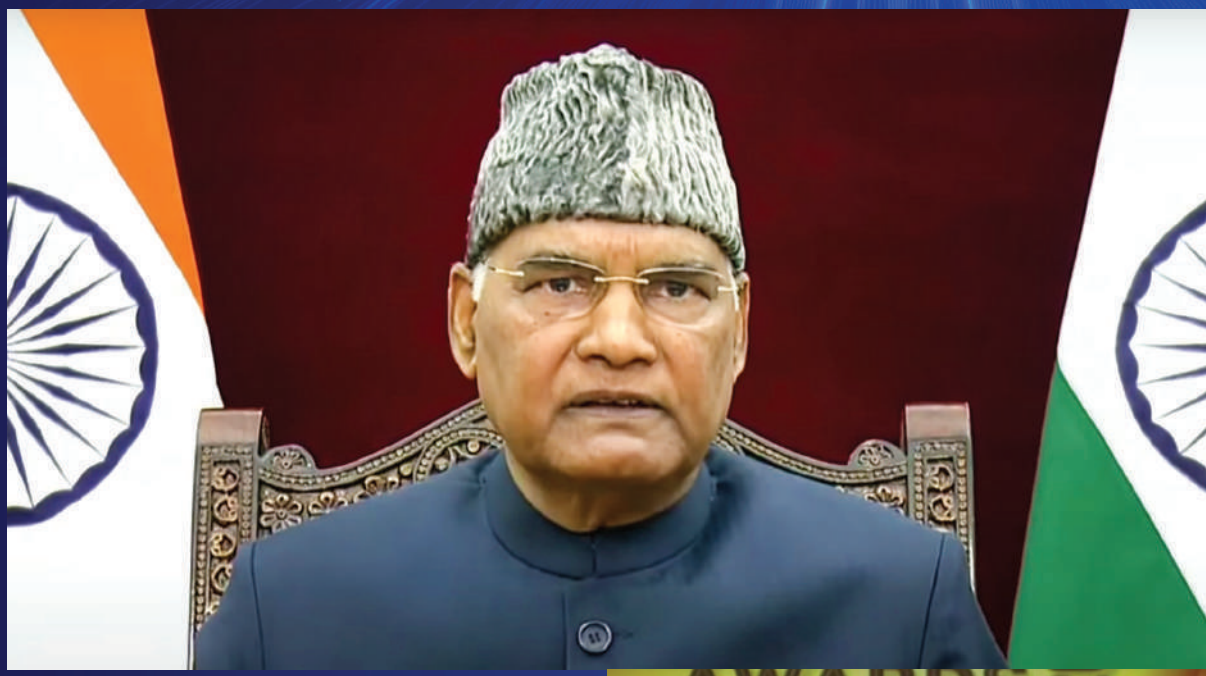
As the COVID-19 pandemic situation unfolded in the country, we were presented with requirements on developing new digital solutions that could aid the recovery and risk mitigation process. Within a short span of 21 days, Aarogya Setu App was launched and has been downloaded by 168 million users so far, making it the most downloaded contact tracing government application in the world. Similarly, solutions such as eOffice for providing a paperless solution to process government files, Video Conferencing for ensuring communication amongst employees and with the citizens, RT-PCR App for testing labs, Direct Benefit Transfer ensuring that financial assistance is transferred to the citizens timely and development of various COVID-19 tracking & monitoring systems, I can say that the developments have been made in various sectors and have been of great help to the government, its organizations and the citizens.

The outreach that technology has created today is worth mentioning. Facilitated through platformization and productization, any programme or initiative launched by the government is realising the vision of reaching the unreached. This has brought inclusion at the centre of any scheme or initiative.

With this, I wish you and your near and dear ones the best of health, happiness, prosperity and a very Happy New Year 2021.

Dr. Neeta Verma
Director General
National Informatics Centre

Digital India Awards 2020



The Digital India Awards 2020 ceremony (sixth edition) took place virtually on 30th December 2020 and the awards were conferred by the Hon'ble President of India, Shri Ram Nath Kovind from Rashtrapati Bhawan via video conferencing (VC), in the presence of Hon'ble Union Minister of Law & Justice, Communications and Electronics & Information Technology Shri Ravi Shankar Prasad, Secretary (MeitY) Shri Ajay Sawhney, Additional Secretary (MeitY) Dr. Rajendra Kumar, Director General NIC Dr. Neeta Verma, esteemed Jury members and other government officials from various Central and State Ministries, Departments, Districts & other government entities. Due to the ongoing pandemic, the event witnessed enthusiastic participation from multiple locations including Vigyan Bhawan, New Delhi and VC locations at Bhopal, Chennai, Kolkata and Patna.

Instituted in 2009, the Digital India Awards event is organised by NIC, MeitY, biennially. The Awards aim to recognize brilliance in digital governance initiatives by government entities at all levels including Central, State, District and local bodies.

The Hon'ble President addressed the virtual gathering and congratulated the winning teams while commending the role of NIC in proactive implementation of platforms such as Aarogya Setu, e-Office and video conferencing services backed by a robust ICT infrastructure that has helped the country reduce the pandemic hardships. Hon'ble Union Minister Shri Ravi Shankar Prasad, Secretary (MeitY) Shri Ajay Sawhney and Director General NIC Dr. Neeta Verma made their speeches during the occasion.

The Digital India Awards 2020 winners included 22 digital governance initiatives/ products by various government entities under 6 categories. Jury Choice awards were given to ArogyaSetu and eOffice. It is noteworthy that the entire process of Digital India Awards, right from inviting nominations to Jury interactions to the final conferring of awards was held online.

Winners

DIGITAL INDIA AWARDS 2020

DIGITAL INDIA AWARDS

DIGITAL INDIA AWARDS 2020

DIGITAL INDIA AWARDS

DIGITAL INDIA AWARDS 2020

DIGITAL INDIA AWARDS 2020
December 30, 2020

Winners

DIGITAL INDIA AWARDS 2020

DIGITAL INDIA AWARDS 2020

DIGITAL INDIA AWARDS 2020
December 30, 2020

DIGITAL INDIA AWARDS 2020

DIGITAL INDIA AWARDS 2020

DIGITAL INDIA AWARDS 2020

Winners

AWARDS 2020

DIGITAL
INDIA
AWARDS

DIGITAL
INDIA
AWARDS 2020

Digital India
Power To Empower

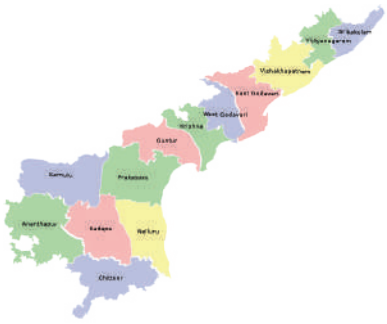
Winners

DIGITAL INDIA AWARDS 2020
December 30, 2020
Digital India
Power To Empower
Government of India
Ministry of Electronics
& Information Technology
NIC
National Informatics Centre

Andhra Pradesh State

Building the State through digital eGovernance

Edited by **REUBAN K**



The State of Andhra Pradesh has made significant contributions in various sectors over the decades. With the advent of the Information Technology Age, the State has started making good use of the Technology in the more efficient running of the Administration and the implementation of various Government Schemes. After the Bifurcation of the State in 2014, the State has embarked on a new beginning and has taken up many developmental activities in right earnest. The State has also initiated several new projects aimed at Ease of Doing Business and faster dissemination of services to the Citizens.

Dr. E. Iniya Nehru
Dy. Director General
& SIO
nehru@nic.in

National Informatics Centre, Andhra Pradesh has always been at the forefront in guiding the State Government concerning the computerization of the processes in various Government Departments. NIC, Andhra Pradesh played a key role in the design, development and implementation of many flagship Projects for the State besides implementing several e-Governance Projects for the Central Government Departments and Public Sector Undertakings. After the bifurcation of the State in 2014, the usage of new technology has picked up momentum and NIC Andhra Pradesh is playing a key role in many of the new initiatives being taken up by the State Government. Apart from software development for various State Departments, the NIC Andhra Pradesh State Centre is providing several ICT Services such as Videoconferencing, Email Services, Network Services and NKN..

ICT Initiatives in the State

Apart from developing and implementing eGov applications and other customised software, a host of Services are offered at the NIC state centre. These include Video Conferencing and Virtual classrooms and supporting various ICT initiatives for state and central government organizations in Andhra Pradesh. Besides, Data Centre Services, Network & Internet Services, Email Services, NKN Services are also provided.

Video Conferencing and Virtual classrooms

VC services are being provided by NIC AP to central and state government offices in the state headquarters and 13 districts. VC services were extensively used by the state government during the Covid-19 Pandemic. During the period of March – November 2020 a total of 2342 conferences with a duration of 4017 hours were conducted with 41 VVIP sessions including 2 sessions of Hon'ble President of India with Hon'ble Governor of AP, 9 sessions of Prime Minister of India with Chief Minister of Andhra Pradesh and 30 sessions of Cabinet Secretary with Chief Secretary of AP.

Network/ NKN Services:

After the new state centre is established, the Network Operations Centre (NoC) started functioning at APSC, Amravati. NKN PoP is established at AP Secretariat by shifting backbone links from NKN Hyderabad to NIC, AP with an established redundant 1 Gbps links from Hyderabad & Chennai NKN POPs. All the 13 district links were shifted to NIC AP from Hyderabad with redundancy links from Hyderabad, Chennai, Bangalore & Bhubaneswar NKN POPs. AP NOC was created with operations including maintenance of AP state NICNET operations,

"Land, a scarce natural resource, has been regarded as a measure of wealth, status and power, from time immemorial. A good land records system is the necessity for any harmonious and progressive society. A modern, comprehensive and integrated land record system to provide citizen-centric services has been developed in Andhra Pradesh, with about 2.70 crore survey numbers. Some of the highlights are Meebhoomi, Sarkarbhoomi, e-Passbook, loan charge module, services through Meeseva, auto mutation, RSR data purification, Aadhaars seeding, water tax levying and collection, sharing of land information to different departments, to arrive at the list of beneficiaries under central and state government schemes.

Government of Andhra Pradesh has taken up Resurvey activity in the entire state, after a century. Land Records is the basic source of information for resurvey so that textual and spatial data would be integrated. It is planned to create an integrated system covering Revenue, Survey and Registration departments together, for the hassle-free and speedy delivery of services to the public as well as other land-related Government departments.

NIC Andhra Pradesh, the technical partner for Land Records Programme, has been playing a significant role in many ways to achieve the above goal by extending services. I appreciate the NIC-Andhra Pradesh team, headed by Dr. E. Iniya Nehru, SIO for their positive contribution and proactive ICT services.

I look forward for their continued support in the future as well and wish them all the best in their endeavours."

NEERABH KUMAR PRASAD, IAS
Chief Commissioner of Land Administration & Special Chief Secretary
Government of Andhra Pradesh

Andhra Pradesh has always been at the forefront of adopting ICT for e-Governance and Citizen services. After the bifurcation of Andhra Pradesh, when the Andhra Pradesh Government decided to shift its Capital to Amaravathi, NIC quickly rose to the occasion and provided all necessary ICT support by way of providing much needed NKN connectivity and other computing facilitates, NICs E-mail, VC facilities, e-Office etc., and facilitated the smooth transition of Governance.

TPDS is one of the flagship programmes and having achieved 100% Aadhaar enabled public distribution, it has immensely helped in curbing leakages. During COVID-19, we could successfully reach the needy families through a robust system developed by NIC AP. Andhra Pradesh is the first state in the Country issuing rice cards within 10days of application anywhere in the State through Gram/ Ward Secretariats with 100% eKYC verification in a very transparent manner with the help of NIC, AP.

Andhra Pradesh has also become the first state to adopt the One Nation One Ration card in the Country.

KONA SASIDHAR, IAS
Secretary (FAC), Information Technology, Electronics and Communication Department & Secretary & Commissioner of Civil Supplies
Government of Andhra Pradesh

ISP coordination and Cisco and Juniper device installation/ up-gradations.

Messaging & Data Centre services:

NIC, AP is successfully providing complete email services in the state including on-boarding and migration of mailbox and domains to NIC email services for paid and free users including state government departments, corporations and universities. Email troubleshooting along with DNS record updation, security controls, e-forms support, application integration and user coordination is regularly carried out. NIC SMS services for AP state including application integration is being taken up. Datacenter services like VM Hosting, Network and Storage services. Provisioning testing and development platforms for open-source application developers based on Linux environments like Ubuntu, CentOS. Providing system and security administration services like OS tuning, Web deployment, App deployment, SSL services and Audit.

D-Krishi (e-Seed - Aadhaar Enabled Seed Distribution System)

The distribution of Seeds on subsidized rates to farmers had been a hectic task for the past few years. To ensure smooth distribution of seed to eligible farmers, NIC, AP has developed and implemented an Aadhaar enabled seed distribution system. Based on the total extent held by the farmer, the eligibility of seeds to be issued is decided by the system. The farmer can avail the seeds in person or can authorize his/ her family member to take the seeds after successful biometric authentication at the counter. On successful Aadhaar authentication using NIC ASA service, the system allows issuing coupons with pre-printed numbers allotted for each counter in each mandal. The coupon is submitted at the godown to take the delivery, where, the QR image on the coupon is scanned to populate the number automatically.

Impact

- Around 20 lakh farmers across the state getting the seed in a hassle-free manner every season since 2017
- Bogus Pattadar passbooks and Double benefit eliminated.
- Middlemen and Recycling of stocks avoided
- No long queues at any point of time
- All eligible farmers covered
- Very positive response from Media/ Farmers/ Public Representative

Punarvas and PM Kisan

Punarvas Project is designed and developed by NIC AP State Centre for payment of compensation to the eligible project displaced families and project affected families by constructing the Nuclear Power Plant at Kovvada, Srikakulam District. Beneficiaries are identified by the District Administration and the data had been captured through the web applications. Android application is developed for Aadhaar Authentication of the beneficiaries to pay the compensations for different awards. Modules under the Punarvas project are Land Acquisition, Land Alienation, RRAward, Structure and Tree Compensations. The same is replicated for the BRR Vamsadhara project of Srikakulam District. It received the National e-Governance award 2018 (Gold Category) under District level IT Initiatives.

e-Pds -Targeted PDS system

NIC Andhra Pradesh has developed a fully automated Public Distribution system from Supply chain Management to Distribution of food grains to BPL Families. Andhra Pradesh NIC digitized and generated about 1.44 crore Rice cards with 100% Aadhaar seeding and 99.9 % ekyc verification. It has fully automated 29,783 Fair price shops catering to 4.3 crore people. All the transactions are based on Biometric authentication and can draw anywhere in the state under the portability option. All the transactions are captured in real-time through e-pos machines. The ration is also being issued to MDM and Aganwadi schools. All the entitlements, allotment of stocks, RO generation, issue of stocks, issue of food grains, and closing balances are fully automated with real-time reports at various levels. Andhra Pradesh e-Pds system has won many state and national level awards.

CARD (Computer-aided Administration of Registration Department)

CARD provides a transparent method of valuation of properties and calculation of stamp duties, simplified the registration procedures, enhanced speed, reliability and consistency of the system. It

▼ Hon'ble President of India interacting with Hon'ble Governor of Andhra Pradesh through VC supported by NIC, Andhra Pradesh

Arogya Setu app and S3 portal have helped AP Government in contact tracing and medical resources effectively at hospitals. NIC Andhra Pradesh state center has provided excellent support to AP Government during the Covid-19 pandemic by providing uninterrupted video conference services which helped us to effectively coordinate during the Covid-19 pandemic at AP. Now, our government is planning to implement eHospital application across all GGH & PHC in the state.

BHASKAR KATAMNENI, IAS
Commissioner, Health & Family Welfare
Government of Andhra Pradesh

reduced delays by replacing the manual systems of copying, indexing and accounting. Scanning of documents replaced manual copying. Retrieval of the documents and obtaining copies is made instantaneous. The overall effect is a smooth public interface.

Recent Initiatives

- Auto Mutation, CRDA Integration, CFMS Integration, Sada Bainama
- Online EC & CC, Inventory Stamps Module, Anywhere Registration, Ease of Doing Business (EODB)
- Registration Services at Gram Sachivalaya

Land Records Management System

AS part of Good Governance, the Government has given utmost importance for simplification of Government procedures and to achieve complete transparency in administration. Keeping in view of the same, Revenue department has initiated a various set of reforms by way of :

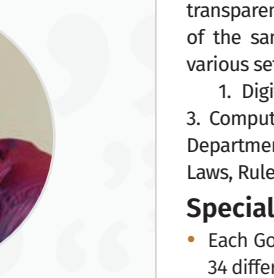
1. Digitization of Land records, 2. Purification, 3. Computerization of various services of Revenue Department. 4. Reforms for simplifying the Existing Laws, Rules and Procedures and 5. Innovations

Special features

- Each Government land is uniquely identifiable, by 34 different categories with 2.70 Crores Survey Nos.
- Records are digitally signed by a competent authority
- Approvals in the workflow are done with biometric authentication and digital certificates
- FMBs, Village Maps, Adangal, 1B
- Single source of truth to many Government stakeholders
- Downloadable e-Passbooks with QR code
- Bhushodak mobile app to verify the genuineness of the data, from the central server
- e-Crop booking through webland data, being used assessment of crop sown, damage if any, and crop insurance
- Payment of Direct Benefit Transfer to the beneficiaries of PMKISAN and YSR Rythu Bharosa
- Collection of Water tax
- Issue of different land-related certificates through CSCs
- Integration of Revenue and Registration under Auto mutation

Achievements

- Computerised Adangals issued through CICs till date: **2.77 Crores**
- Record of Rights(ROR-1B) Certificates issued till date: **2.66 Crores**
- Mutations and Printing of Title Deed cum PPB: **52.5 Lakhs**
- Rectifications of Entries in Record of Rights: **54 Lakhs**
- Addition of Survey nos. in Adangal and 1B: **2.86 Lakhs**
- Number of Views of Public Portal (Meebhoomi): **10.6 Crores**
- Number of Auto mutations Done Since Oct 2019: **2.45 Lakhs**



I am extremely happy to say that MEDHAS developed by NIC has been providing a transparent, smooth and effective mechanism in bringing end-to-end solutions seamlessly. Dr. NTRUHS has been benefited a lot from the digital workflow among Academics, Admission, Examination, Confidential, Finance and Administration wings.

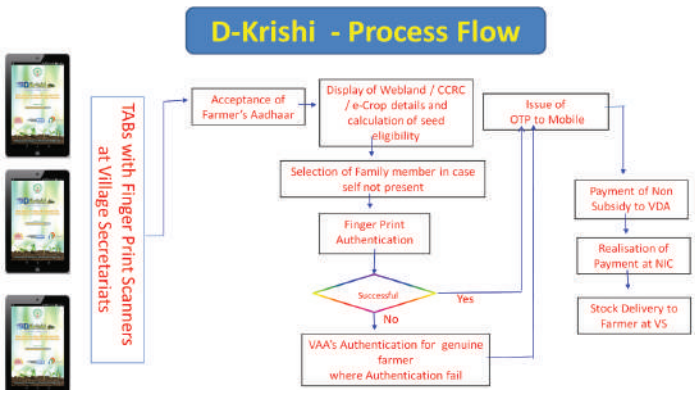
Dr. SYAMA PRASAD PIGILAM
Vice Chancellor
Dr. NTR University of Health Sciences
Vijayawada

- Major component for achieving Ease of Doing Business Rank.

MEDHAS – Medical Education & Health Administrative System

MEDHAS is an end-to-end solution provided by NIC-APSC for Dr.NTR University of Health Sciences (Dr. NTRUHS) which is the first Health University in India established in 1986 at Vijayawada, Andhra Pradesh. It conducts various courses like UG/ PG Degree/ PG Diploma/ Post Doctoral Fellowship/ Ph.D under Medical/ Dental/ AYUSH/ Nursing/ Physiotherapy/ Para Medical streams. There are 292 colleges affiliated with Dr. NTRUHS. It has been provided NKN connectivity with BSNL and STPI as a backup for providing bandwidth. NIC is also taking steps for e-Counselling to the admissions of Medical/ Dental/ AYUSH courses from next year.

D-Krishi - Process Flow


D-Krishi - Process Flow
TABs with Finger Print Scanners at Village Secretariats
Acceptance of Farmer's Aadhaar
Display of Webland / CCRC / e-Crop details and calculation of seed eligibility
Issue of OTP to Mobile
Selection of Family member in case self not present
Finger Print Authentication
Successful
Yes
No
VAA's Authentication for genuine farmer where Authentication fail
Payment of Non Subsidy to VDA
Realisation of Payment at NIC
Stock Delivery to Farmer at VS

Launching of Online Original Degree, Official Transcript and Migration Certificate (OD+OT+MC) for MBBS students of Dr. NTRUHS using ServicePlus on 14-08-2020 by Dr. K.Syamal Prasad, Hon'ble VC, Dr. K.Sankar, Registrar of Dr. NTRUHS with Dr. E. IniyaNehru,DDG&SIO

▲ Chief Minister of AP, Shri Y.S. Jagan Mohan Reddy inaugurating Auto Mutation Project on 11/02/2020 with Shri Pilli Subhash Chandra Bose, Hon'ble Minister for Registration and Stamps, Shri Neerabh Kumar Prasad, IAS, CCLA & Spl. Chief Secretary, Dr. E.Iniya Nehru, DDG & SIO, NIC, AP and other higher officials.

Key Features of MEDHAS

- e-Affiliation (Colleges Affiliation Monitoring Module)
- E-Admission (Students Admission Monitoring Module)
- E-Pareeksha (Examination Monitoring Module)
- E-QPODS (Electronic Question Paper Online Delivery System)
- E-Results (Results Processing and Publishing Module)
- E-Services (Online Certificates Delivery Monitoring Module through ServicePlus)
- E-Sandesh (Messaging to Principals/ Students Monitoring Module)
- E-OPTMIS (Online Payment Transactions Monitoring Module)
- E-Chanakya (Employees Administration Monitoring Module)
- E-GPF (GPF Monitoring Module)
- E-Office (Online File Movement Monitoring Module)

APMCORS- Andhra Pradesh Medical Council Online Registration System

Andhra Pradesh Medical Council is a Body corporate established by an Act of the State Legislature. The Council was first constituted by a notification issued in G.O.Ms.No.662 on 19th December 1991. NIC has been entrusted with the Online Registration activities of APMC in January 2020 which includes importing all existing registration into living. NIC –APSC developed a web-based application to make the digital workflow of different stakeholders – Medical College Principals, Students, Doctors and APMC Staff.

Salient Features:

- End to End Solution for all stakeholders like Medical Colleges, Medical Students and the APMC to make the entire workflow in digital mode
- Renewal of Registration certificate. Issue of NOC, Temporary Registration, Issue of Good Standing Certificate

WaterSoft

WaterSoft– is a comprehensive web-based MIS designed & developed by NIC, APSC for the Department of Rural Water Supply and Sanitation, Govt of AP. The application software integrates all the RWSS offices and its laboratories across the State of AP including the RWSS head office and the Secretary's office. This application aims to bring in accountability and transparency. The application under one name WaterSoft is being continuously subject to changes with many more new enhancements to the existing modules and the development of new modules to suit the requirement of the field level users to the strategic users for monitoring, planning and decision making. The application can be accessed with the url: http://rwss.ap.nic.in.

Online Filing of Applications for POLYCET entrance exam

This application program is to file the application, facilitates the candidate to pay the requisite fee, automatic Exam Centre Allocation and Hall Ticket download for the candidates who want to write POLYCET entrance exam. State Board of Technical Education and Training is the user department, which conducts the Polytechnic Entrance Test (POLYCET) for admission into 3, 3½ years polytechnic diploma. Simply from anywhere with an internet facility, the student can have on the spot Hall Ticket in the desired town of his choice by paying the requisite fee through the payment gateway.

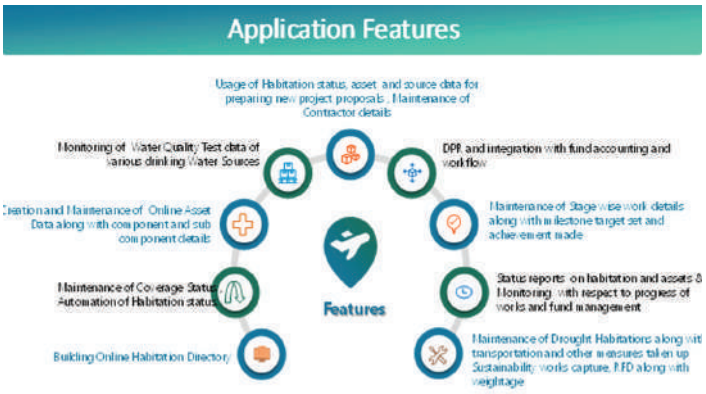
WEB Counseling

This application is for admission of the candidates to the various professional courses based on their rank in the respective entrance examination, reservation, gender, local/ non-local etc., and their order of preference given for the colleges and courses. This activity is supervised by the department, Andhra Pradesh State Council of Higher education (APSCHE) and monitored by the Conveners appointed by the APSCHE for each CET (Common Entrance Test).

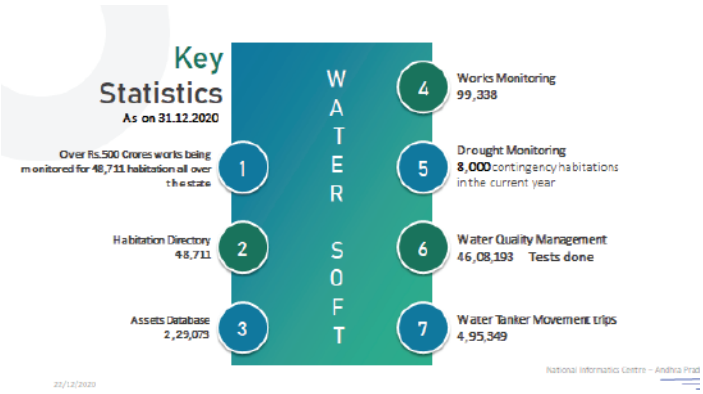
Jeevandan

A Portal to facilitate the management of Cadaver organ harvesting and transplantation on an end-to-end basis. It provides information and alerts

▼ WaterSoft Application Features


Application Features
Usage of Habitation status, asset and source data for preparing new project proposals , Maintenance of Contractor details
Monitoring of Water Quality Test data of various drinking Water Sources
DPR and integration with fund accounting and workflow
Maintenance of Stage wise work details along with milestone target set and achievement made
Maintenance of Coverage Status Automation of Habitation status
Status reports on habitation and assets & Monitoring with respect to progress of works and fund management
Features
Building Online Habitation Directory
Maintenance of Drought Habitations along wit transportation and other measures taken up Sustainability works capture, FFD along with weightage

▼ Key Statistics of WaterSoft


Key Statistics
As on 31.12.2020
WATER SOFT
1 Over Rs.500 Crores works being monitored for 48,711 habitation all over the state
2 Habitation Directory 48,711
3 Assets Database 2,29,073
4 Works Monitoring 99,338
5 Drought Monitoring 8,000 contingency habitations in the current year
6 Water Quality Management 46,08,193 Tests done
7 Water Tanker Movement trips 4,95,349

▲ Hon'ble Chief Minister of Andhra Pradesh interacting with the Hon'ble Prime Minister of India and other Chief Ministers during Covid-19 Pandemic through NIC VC Services

▲ Hon'ble Chief Justice of Andhra Pradesh inaugurating official website of Andhra Pradesh High Court

to users on a real-time basis, ensuring efficiency, effectiveness and transparency in the entire operations which are part of the Jeevandan Scheme and is built on an N-tier.

Online transparent end-to-end solution to facilitate the Management of Cadaver Organ Harvesting and Transplantation has been designed developed and deployed successfully.

e-Office

eOffice is a step forward into an era of paperless administration in the Government of Andhra Pradesh. It is a Digital Workplace Solution that has replaced the existing manual handling of files and documents with an efficient electronic system.

eOffice is being implemented in all the departments of AP. Secretariat, 13 Districts and 83 HoDs/ 157 AOs/ 23 SUs. At present, there is no physical file movement in the Government. ITE&C Dept has successfully implemented the project and are extended to 1,428 departments in Districts up to Gram Panchayats level and has created a total of 66,07,427of files in both State and District level.

Pension Settlement and Management Information System (PSMIS)

This application is to calculate and release the pensionary benefits to the retired/ nominee of the deceased State Government Employees, Central government employees deputed for State (IAS, IPS, and IFS) and Judicial employees of the State. This application is used by the Account General's office who is the releasing authority of the pensionary benefits. Right from registration of the case till dispose of the case is taken care of by the application.

Digital Panchayat Services

Commissioner Panchayat Raj and Rural Development, Govt. of Andhra Pradesh has initiated Digital Panchayat services to provide Online Gram Panchayat Services and to offer the technology. PRRD is offering series of APIs to Government Departments (G2G) as part of Ease of Doing Business (EoDB). Entrepreneurs can obtain a "No Objection Certificate for Small, Medium and Large Scale Industries" through the Single Desk Portal of Industries and Commerce department. Marriage Registration APIs for Pellikaanuka Scheme for financial assistance to marginalized families and to offer Marriage Certificate. The citizen can also obtain Birth and Death Certificates, Marriage Certificates and NOC for Small Medium and Large Scale Industries services at "Grama Sachivalyams".

The citizen can avail Gram Panchayat services through the Internet. The list of Statutory Services of Gram Panchayat are 1. House Tax Payments 2. Property Valuation Certificate 3. Water Tap Connection 4. Trade License 5. Mutation 6). NOC for Small, Medium and Large Scale Industries 7. Marriage Certificate 8. Building Permission 9. Layout Permission.

AP High Court

NIC, AP is providing IT support for implementing e-Court Services, CIS and other peripheries developed by e-Committee, NIC – Pune and NIC Andhra Pradesh State Centre. The High Court servers were temporarily installed at NIC AP State Centre for running the CIS core application and other peripheries. Permanent servers are to be set up at High Court for running peripheries and CIS. New VMs are set up at National Data Centre, Shastri Park, New Delhi for deploying the website and related applications for dissemination of information.

The main application & peripheries implemented at High Court are Core Information System (CIS) and various peripheries such as KIOSK application, SR, IA, USR Allotment, Scrutiny of Vakalat, File Movement etc.

Hon'ble Chief Justice of Andhra Pradesh, Sri Justice Jitendra Kumar Maheshwari has launched the Website of High Court on 08th January

2020 in the august presence of Hon'ble High Court Judges, Registrar General & CPC, Registrars of High Court, Assistant Registrar IT and Dr. E. Iniya Nehru, Deputy Director-General and SIO, NIC, Andhra Pradesh. Website for High Court of Andhra Pradesh was redesigned as per the GIGW standards

During the COVID-19 pandemic, the NIC AP High Court team has developed e-Filing software. This system is designed as per the request of the Hon'ble Chief Justice of Andhra Pradesh. An E-filing system

▼ Drugs control Administration web page

Drugs Control Administration
Sales licensing System
Government of Andhra Pradesh
Apply Online
SLS Login (DCA Offic
Designed and Developed at NIC APSC for DCA

▼ NIC Andhra Pradesh State Centre received the "Award of Excellence" during elets National Water Innovation Summit 2020

was launched to facilitate Advocates and other people. E-filing of court cases is newly implemented at the High Court of Andhra Pradesh. After seeing its success and huge response from the public, it was extended to Subordinate Courts. A provision to know the status of the case filed is provided.

During the COVID-19, virtual courts were implemented using various Blue Jeans in all 19 courts.

Five Video Conferencing studios are set up in the High Court for conducting State level and National level VCs.

APBOCWWB (Andhra Pradesh Building & Other Construction Workers Welfare Board)

The main objective is to automate the process of Distributing Benefits to Building & Other Construction Workers under various schemes. This application enables construction workers to register online for availing various govt scheme benefits, get enrolled for skill development training and submit a request for claims and process the same through a workflow & role-based system.

Construction Workers, Assistant Labor officer (ALO), Deputy Commissioner of Labor (DCL) and Board Members are the actors of the system. Workers apply for training and claims which are verified by ALO within their jurisdiction and forwarded to DCL at district & Board at Hq level for further process.

As of today, around 20 Lakh construction workers are registered on this portal. During Covid-19 this data has been extensively utilised to provide additional benefits to workers.

DCA (Drug Control Administration System)

Drugs Control Administration regulates the sale and distribution of drugs in the state of Andhra Pradesh. It is workflow-based software designed to automate processes and issue/ generate license online. This software facilitates online Submission of Applications, License fee Payment, Verification by officials, Grant/ Renewal of Drug License, Amendments to existing licenses, Application Status tracking and monitoring, etc. Drug Firm owners/ directors apply online for various types of licenses like retail, wholesale, restricted, mobile, schedule by submitting desired documents online and making fee payment online. This application is being used by 105 Drug Inspectors and 13 Assistant Directors across the state. As of today, around 45000 drug licenses are issued by this system. APIs have been developed for Authenticating Pharmacist Registration and Identifying Pharmacist Location to Pharmacy council. Another API is in the process of development for drug license issues through a single desk portal (SDP) of AP Govt as part of EoDB

ITI Admission

This application is designed to make the ITI admission life cycle process online, simple and transparent. The main modules of this application are Student Application, Scrutinize the applications, Merit list generation, Seat Matrix allocation, Seat Allotment and Admission Slip Generation. Around 500 ITIs of both government and private institutes use this system for the admission process every year. Normally around 50,000 students get admitted every year.

This year during the Covid-19 period, a special module has been designed for students to apply and submit documents online. This has eliminated the process of student visit various ITIs for document verification during this pandemic. APIs have been designed to get SSC marks data from the board and update student details on the central skill development portal.

Sarathi & Vahan

Sarathi and Vahan Services in Andhra Pradesh has started to take its shape. Currently, it is in testing mode. The new e-KYC module which is going to be introduced in Andhra Pradesh is the first of its kind.

ICJS – Interoperable Criminal Justice System.

The Inter-operable Criminal Justice System (ICJS) is an initiative of the e-Committee to enable seamless transfer of data and information among different pillars of the criminal justice system, like courts, police, jails and forensic science laboratories, from one platform.

Andhra Pradesh has recently bagged 2nd place in the awards announced by the National Crime Records Bureau – NCRB.

e-Prisons

Andhra Pradesh has 82 active prisons. central prisons 4 District jails 8 PAC 1 and Spl. Prisons for Women 2, Spl. Sub jails 11, Sub jails 56. E-prisons software is being implemented in these prisons and digitized 11.00 lack backlog cases. This software covers the entire life cycle of a prisoner.

e-Prosecution

All the 13 districts of Andhra Pradesh are covered with the e-Prosecution software and all the Public prosecutors were trained to utilize the software for information flow from FIR data, legal opinion to integrate with e-Courts software. This software provides easy access to the Director of Prosecutions at state Head Quarters to monitor the progress of various cases.

e-Forensics

Andhra Pradesh is having 7 Forensic labs currently. e-Forensics software is being used by all 6 forensic labs and State Hq laboratory to register, acknowledge and report various samples sent from the Investigating officers.

Special IT support during Outbreak of Pandemic COVID-19

Ensuring round-the-clock networking & email services, smooth execution of Video Conferencing meetings of Hon'ble PM, Hon'ble President with all state CMs & UT Administrators regarding COVID-19 were conducted at CM Camp Office for Hon'ble Chief Minister, Chief Secretary of AP. Regular review meetings through VC on Covid-19 by Central Cabinet Secretary with Chief Secretary, Health Secretary and Administrators of all States and UTs, DGP, we conducted through VC services provided by NIC APSC.

▲ elets Award certificate

24 x 7. NICNET/ SWAN/ NKN internet services were ensured with constant monitoring of all the websites and other applications. VPN provided to staff to facilitate work from home during the lockdown.

In addition to these, various indigenous s/w applications and mobile apps were developed by NIC, APSC and NIC District Centres to support different Covid-19 related activities across the state.

Accolades

- RWSS Department, Government of Andhra Pradesh and NIC Andhra Pradesh State Centre received the "Award of Excellence" during elets National Water Innovation Summit 2020
- ePanchayat Puraskar – 2020 - Panchayat Enterprise Suite & Digital Panchayat - Ministry of Panchayatraj Puraskar for efficient usage of IT for 2018-19
- eGovernance Award for Punarvas– Land Acquisition & Rehabilitation at National e-Governance award 2018 (Gold Category) under District level IT Initiatives
- CSI-Nihilent Award for the application DKrishi
- Hon'ble CM AP Appreciation to WEBLAND and AePDS applications. The technical team received CM appreciation and felicitation during November 2018
- CSI-Nihilent Award for CARD(Computer-Aided Registration Department)
- National e-Governance Award (Gold Category) for the Loan Charge Module of Webland

Way Forward

National Informatics Centre, Andhra Pradesh State Centre has always been the backbone of the major technology initiatives in the State and has been its technology partner in rolling out many Projects. Looking ahead, the focus is on new paradigm shifts in terms of more efficient e-governance services delivery. We look forward to embracing emerging technologies such as Edge Computing, Deep Learning, Blockchain, AI and ML and using them effectively in future Projects

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Chhattisgarh State

Digital Empowerment for State Administration during COVID-19 and beyond

Edited by **DIBAKAR RAY**

NIC Chhattisgarh plays a vital role in the ICT enablement of the state government. During the COVID-19 pandemic, as has been always, NIC has tremendously supported the state government to act briskly and effectively to counter the ill effects, and help the people adapt to the new normal while ensuring uninterrupted government business and public service.

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Carved out of the erstwhile Madhya Pradesh, the Chhattisgarh state came into being on the 1st November 2000. It is the 10th largest state in India in terms of area. The state is blessed with abundant natural beauty, waterfalls, rivers, caves, and vast forests with a variety of wildlife as well as diamond, iron, coal and bauxite mines. The ancient temples and structures dating back to the 5th century A.D. are the surviving symbols of the state's glorious history and rich culture.

ICT Initiatives in the State

CORONA Guidelines, Govt. of Chhattisgarh

The portal (http://gad.cg.gov.in/cgcorona/) as a single source for all government circulars and information regarding SOP to handle the current COVID-19 pandemic was developed which is accessible to all departments and public as well. The portal facilitates state as well as district officials to upload relevant circulars on the portal.

COVID-19 Monitoring System

The System is used to monitor the admission of Covid-19 positive patients either in identified hospitals or in Home Isolation. The facility is provided for the common man to get the sample test report online. To date, about 21 lakh SMS have been sent to the people of Chhattisgarh and around 5 lakh people have downloaded their test report.

Statistics as on 5.12.2020

• Total Tests	**2500000**
• Total Admissions	**242418**
• Total Hospitalized	**99225**
• Total Home Isolations	**140252**
• Total Discharged	**220177**
• Total Death	**2941**

Features

- Analytical Dashboard and District/ Hospital/ Lab wise Hospital Admission, Discharge/ Death Report
- Home Isolation and Referred Patient Report
- A daily report of total test conducted
- Bed availability in Covid-19 Care Center
- Online Test Report and Test Report through SMS
- Linked with Central ICMR Portal

State Govt. is issuing COVID-19 pandemic daily Media Bulletin based on data available in this portal. Districts are generating various reports on hospitalisation and Home Isolation data..

Photo-walaTracker: Quarantine Centre Monitoring System

For Individual surveillance and tracking of home-quarantined individuals during the COVID-19 crisis, District Mahasamund has deployed an ingenious mechanism, which integrates the efforts of field-level health staff with an online, simple-to-use facility. Tracking persons with foreign, interstate as well as intra-state travel history, Home quarantining them as per established protocols, followed by a photo of daily visits by field level health staff, etc. were captured. Shelter Camp Monitoring is facilitating tracking ofGovt. and Private shelter camps, Capacity, Minimum Basic Facility, Ration provided and uploading of Daily Inspection Photo. Given the risk assessment, all the Home Quarantine persons have been included in the daily photo tracking system.

Chhattisgarh government launched "Rajiv Gandhi KisanNyayYojna" in which four thousand five hundred crore rupees were transferred to the needy farmers so that they could arrange the seeds, fertilisers and other items for the next season. Similarly, to deliver free ration to stranded migrants under "AtmaNirbharYojna", an App has been launched with the help of NIC. Also launched were web page and registration portal whereby migrants can register themselves to provide details of their family members and get free ration. We appreciate the support of NIC Chhattisgarh throughout to make the initiatives a success.

KAMAL PREET SINGH, IAS
Secretary, Food
Govt. of Chhattisgarh

District Containment Plan and Quaiso Tracker Mobile Application

Dhamtari District developed the GIS-based Containment plan which was effectively used in more than 20 districts of Chhattisgarh. District Containment Plan has Geo-referenced maps of Hospitals (Govt. & Private) built on Arc GIS platform.

District containment plan contains:

- Logistics details i.e. Medical equipment available

> Chhattisgarh government wishes to compliment the support and assistance rendered by the team NIC during the COVID-19 unprecedented situation as well as the lockdown period. In numerous ways, the Chhattisgarh government Labour department has reached out to the stranded migrant workers throughout the country and this was all Possible for prompt and laudable support and action as well as an untiring effort of NIC Chhattisgarh. They were more than willing to support us. I wish the team all the very best in the future

SONMONI BORAH, IAS
Secretary, Labour
Govt. of Chhattisgarh

up to PHC, CHC, SHC level
- Manpower availability
- SOPs and Health advisories issued by ICMR and State Health Department

Based on the District Containment Plan, a mobile application was developed to keep records of 403 Quarantine centers and home isolated people within the district.

Online donations for Chief Minister's relief fund

To accept online payment through various modes, NIC Chhattisgarh has designed an online portal powered by ServicePlus during the first lockdown and was launched on 2nd April 2020. The site offers various payment modes like UPI, Net Banking, Credit Card, Debit Card and branch payment.

- **Total Donations Received** Rs. 29,65,301.00
- **No. Of Donors** 471

Mobile app for free food distribution monitoring

A mobile app was developed for the Social Welfare Department, to collect the online information of free food distribution in the state to the needy and homeless persons during the Covid-19 outbreak. The distribution was carried out by the department in all districts and blocks of the state. The app facilitates the district officials to feed the information of the location of the food distribution, the number of persons who benefitted along with the photographs.

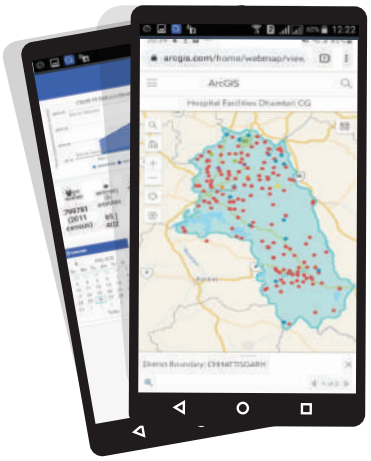
- **Total No. of Food packets Distributed** 13,16,669

e-SAGA (e-Shramik Aawas-Gaman Application)

Labour Department, being the nodal authority for the welfare of workers, was supported by NIC Chhattisgarh with various online applications for effective management of the movement of migrant workers. e-SAGA supported migrants to provide their travel requests to enable the department to arrange a train facility for them. The module was also developed for keeping the record of all migrant workers coming through different trains to Chhattisgarh from other states.

- **Persons registered to arrive in Chhattisgarh** 2,96,902
- **Person registered depart from Chhattisgarh** 22,739
- **Number of trains organised** 86
- **Number of passengers commuted** 1,09,389

Relief Camp Entry Module was developed to keep a record of all workers who stayed in the relief camp established by the Government and NGOs. Workers were categorized in two formats i. Workers Stayed in relief camps (Format-A) and ii. Workers stayed in Camps organized by factory owners and by contractors (Format-B). The Call Center Helpline Module was developed to collect problems and complaints of workers related to food and shelter etc.



▲ District Containment Plan and Quaiso Tracker Mobile Application

RojgarSangi Mobile App

The mobile app along with Chhattisgarh State Skill Development Authority (CSSDA) portal facilitated the skilled people looking for a job and also the Employers to get registered and be connected based on the skillset mapping. Both the applicants and employers have the facility to send messages to each other through the app itself.

- **Total Workers under Format-A** 6308
- **Workers under Format-B** 27481
- **Registrations through CSSDA portal** 96902
- **Registrations through App** 21631

Padhaayi Tunhar Duaar

NIC, Chhattisgarh worked with the Department of School Education to continue educational activities during the pandemic by developing cgschool.in portal and Mobile App under the project "Education at Doorstep". The site was inaugurated by Hon'ble Chief Minister of Chhattisgarh on April 6th, 2020 and became an immediate success with more than two lakh teacher registrations and 24.52 lakh student registrations. 'Education at Doorstep' is a comprehensive academic cycle management system that includes textbook delivery, lecture videos for each chapter, online classes, assignments for each student, student homework management and student doubt clearance.

▼ CORONA Guidelines web page

▼ COVID-19 Monitoring System web page

Covid19 Monitoring System
Department of Health and Family Welfare Chhattisgarh
NEW Welcome To COVID-19 Monitoring System

IGKV's Student App e-KrishiPathshala

The App facilitates students of Indira Gandhi KrishiVishwavidyalay (IGKV), to carry out learning activities online in the prevailing pandemic times. Faculty members can upload study materials (in Hindi & English), Assignments, video lectures, create examination question papers and fix exam schedules. They can also evaluate assignments, answers and record the marks for each student. They can also respond to student queries.

Students on the other hand can view the video lectures of their courses uploaded by the professors of their college as well as other colleges affiliated to IGKV. They can download assignments, appear for exams online at a specified time and upload the answer papers. They can post their queries regarding any topic pertaining to their registered courses and get the responses of the concerned professors. A mock test facility has also been provided to enable students to prepare for the examinations.

E-Counselling module

The system aims at streamlining the admission process during the Covid-19 period in all phases of counselling and Post counselling of IGKV while providing 100% transparency in the entire process. Seat allocation is done as per the merit, reservation policies and choices exercised by the candidates in IGKV. For UG, PG & PhD, the candidates have to apply online for counselling and deposit the fees through the SBI payment gateway to finally seek their admission as per the rules.

Integrated Management Information System (IGMIS)

IGMIS was conceived as a framework incorporating fully digitised solutions for all activities of Indira Gandhi Krishi Vishwavidyalya (IGKV), Raipur. It is a web-enabled, role and work-flow based ERP solution for IGKV to accomplish activities like counselling, education, examination, research, extension, establishment, finance, web portal etc. This integrated system enables e-Governance in 31 Colleges, 8 Research Station, 20 KVK situated in most remote places of Chhattisgarh. It is highly beneficial for students, employees and farmers of Chhattisgarh. IGMIS MOBILE APP IGKV introduces the next generation experience to enhance the quality and effectiveness of education and learning on favourite mobile/ tablet devices. It provides access to student profiles, registration cards, fee receipts, result notifications and an employee corner.

Home Valuation Module for CGBSE

Chhattisgarh Board of Secondary Education, Raipur (CGBSE) needed to evaluate the answer sheets of High School and Higher Secondary School Examination for the academic year 2019-20. Due to the COVID-19 pandemic NIC, Chhattisgarh has provided a solution to evaluate answer sheets by teachers from their homes. For this, teachers were provided login-id so they can enter the required details for Home Valuation. The valuation officer could maintain the stock of answer books categorized on subject and class. Detailed instructions and OTP-based profile features are provided on the portal. The valuation module facilitated the department with ease of use and safe to work pattern. A comprehensive dashboard is provided to all 29 valuation offices/ districts and Head Office.

- **Total teachers registered** 7492
- **Total answer sheets evaluated** 3377328

Monthly Assignment Module

CGBSE has started online streaming of classes for students of 10th and 12th Class. NIC Chhattisgarh has developed a monthly assignment module for students based on which teachers can evaluate student's progress. This web-based system provides a comprehensive solution to manage and enhance the assignment and marks the entry of every subject every month.

- Total students marked for assignment 8,28,992
- Total assignments submitted
  - Sep 20 4357654 (94%)
  - Oct 20 3989252 (86%)

Immigration Visa and Foreigners Registration & Tracking System (IVFRT)

The Online C-Form module of the system was utilised for generating details of foreigners staying in different Hotels, Guest Houses etc. Online Registration, Visa Extension, Exit Permit and other services continued without any hindrance during the COVID-19 lockdown period. Online service certificates were rendered to applicants through email. IVFRT system helped in the Inter-country movement of stranded foreigners.

"Individual surveillance and tracking, of home-quarantined individuals during the COVID-19 crisis, in as non-obtrusive a manner possible, while maintaining the integrity of daily home visits by a health worker is a good and effective practice initiative by District Mahasamund with the help of NIC District Centre in Chhattisgarh."

KARTIKEYA GOEL, IAS
Collector & District Magistrate
Mahasamund

Inter-operable Criminal Justice System (ICJS)

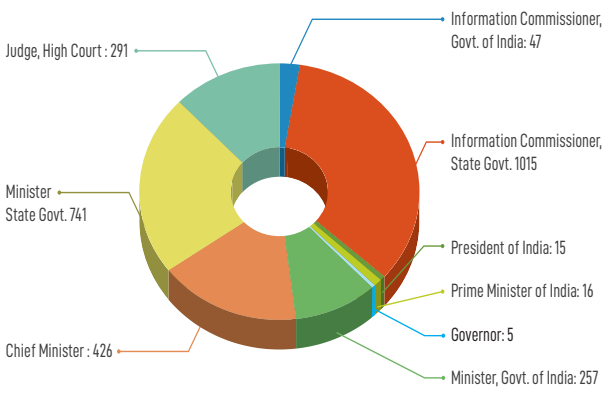
ICJS portal was accessible to all the police stations of state during lockdown period for dynamic searching and integrated view of ICJS pillars database. e-Forensics Application under ICJS project was in continuous use in Forensic Science Laboratories for registration and monitoring of the cases.

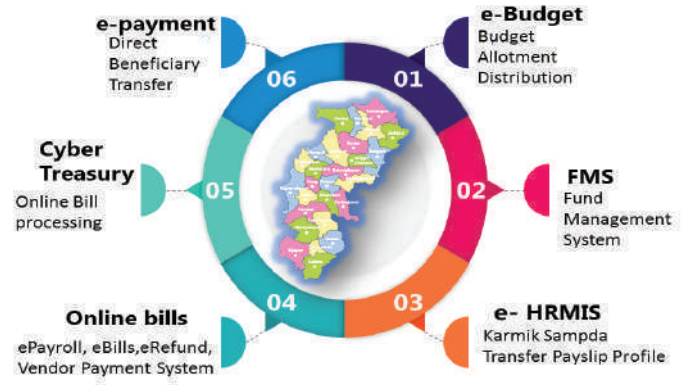
Video Conferencing Services

Chhattisgarh is in the 4thposition among the top 10 states in average Studio utilization during Covid-19.

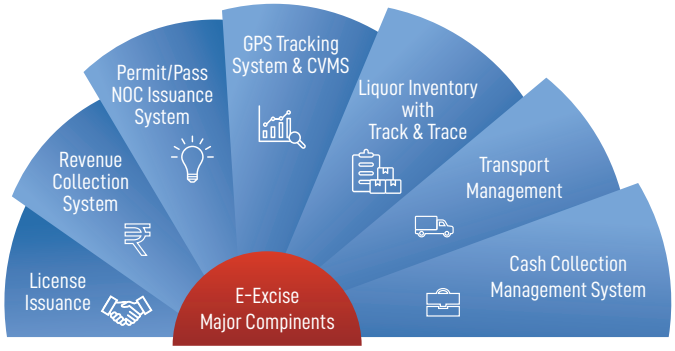
▼ Padhaayi Tunhar Duaar web page

▼ Video Conferencing meetings Report


Information Commissioner, Govt. of India: 47
Judge, High Court : 291
Information Commissioner, State Govt. 1015
Minister State Govt. 741
President of India: 15
Prime Minister of India: 16
Governor: 5
Chief Minister : 426
Minister, Govt. of India: 257



▲ ISFMS Services



▲ Components of Excise

NIC CG provided extensive Videoconferencing facility support from 28 districts and 22 studios of Govt. offices at Raipur which includes Raj Bhawan, CM office, Mantralay etc.VC of Hon'ble CM with Hon'ble Prime Minister and Hon'ble Governor with Hon'ble President were organised regularly during COVID-19.

- **Total number of studio based VC during lockdown** 1600
- **Total Studio participated** 71
- **Desktop VC** 600
- **Number of Sites participated** 13609
- **Total Site hours** 19267

NKN Connectivity

NKN Connectivity at Universities/ Institutes played a vital role during Covid-19. Also keeping the network up was a big challenge for NIC as most of the officials were working from home. A 24/ 7 roster was prepared to monitor the links for smooth connectivity.

Indira Gandhi Krishi Vishwavidyalaya (IGKV): Scientists of University using NKN connectivity could prepare more than 100 research papers and submitted for publications.

Indra Kala Sangeet Vishwavidyalaya, Khairagarh: Most of the foreign students were stuck in the hostel s during the lockdown and they regularly used the NKN link.

All India Institute of Medical Science (AIIMS): NKN connectivity made social distancing possible. Covid-19 portal of AIIMS, Raipur was extensively used.

eKosh

Integrated State financial management system (ISFMS) is an IT-based budgeting and accounting system that manages spending, payment processing, budgeting and reporting for governments and other entities. Components include computerization of Treasuries, eBudget, KarmikSampda, ePayroll, ePension, ebill, vendor Payment System, Pension and Cyber Treasury.

Seamless operations of Treasuries during Covid-19 period

NIC CG provided the facility to Treasury Officials for work from home using OTP-Based authentication in cyber treasury application. DDOs prepared the bills and sent the scanned copy to Treasury. The new option of voluntary contribution was enabled in the e-payroll module and a provision was made to deposit the said amount in the CM Relief Fund under the Cyber Treasury. The budget was uploaded for the new financial year and the budget distribution module was opened for budget controlling officers.

Excise

e-Excise is a strategic administrative reform initiative of Chhattisgarh State Excise leveraging state-of-the-art modern technology to provide an end-to-end solution in a workflow-based manner. It comprises Automated Supply Chain Management for excisable goods, Tracking duty evasion by generating a 360-degree profile of the Excise Licensees, Issue Permits & Passes for movement of excisable goods, Pendency checker for tracking process pendency at all hierarchical levels.

ERP Solution for C.G. Text Book Corporation, Raipur

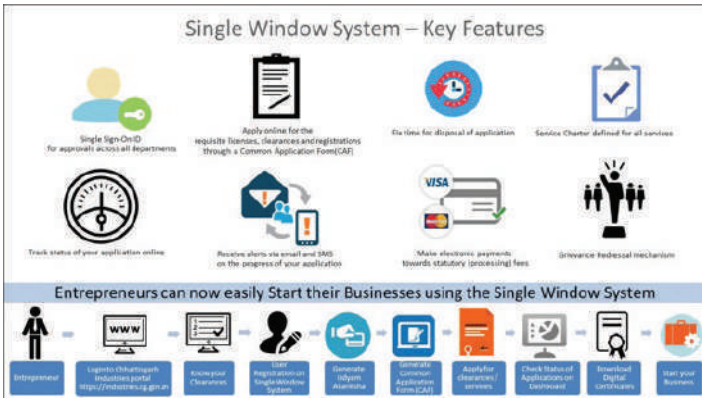
Intelligent & Integrated Book Printing & Distribution Process Management System has been implemented covering Online Tender Management with respect to paper supplier/ Paper Mill, Printer, Transporter, and Paper Depot, Book Depot Management. Printers Window facilitates tender login, paper Demand generation, Challan generation for dispatch of the book as provided by the distribution section. A bookseller can register and buy books online. An automatic discount is applied depending on the order quantity. Keeping Covid-19 situation in view, an eBook (Online Flipbook) facility has been developed which requires less bandwidth to load the book page by page for reading by the school students.

Beneficiaries of the solution

- 5161958 Students
- 4720 State Govt. High Schools
- 2662 -Cluster of Schools

▼ ERP Solution for C.G. Text Book Corporation

▼ Key features of Single Window System


Single Window System – Key Features
Entrepreneurs can now easily Start their Businesses using the Single Window System

Continued on Page 33

Changlang District

The ICT initiatives in The Land of Bio-diversity

Edited by **KAVITA BARKAKOTY**

During the Covid-19 pandemic period ICT services of the National Informatics Centre, Changlang District Centre became all the more important. The District Centre in collaboration with the State Centre implemented various services, which facilitated the emergency movement of people and goods. Support was also provided to help the District Administration in enabling large-scale Testing and Contact Tracing.

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Keshav Singh Gautam
STA & ADIO
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The Changlang District, which is one of the easternmost districts of India, is located in the south-eastern corner of Arunachal Pradesh, having an international boundary with Myanmar (Burma) in the east and the south. It has an area of 4,662 sq. Km and a population of 1, 48,226 persons as per the 2011 Census. Changlang District was created as the 10th District of the Arunachal Pradesh on 14 November 1987 by carving out part of Tirap District.

NIC District Centre, Changlang

With its inception in July 1989, NIC Changlang district Centre started its journey with just one NIC officer and a single 386 machine with a handful of terminals. However, the modest resources did not come in their way towards providing ICT support to the district administration and in the implementation of ICT-based citizen services and government schemes in the district. Being one of the remotest districts of the country with no other ISPs, in the early years NICNET played a pivotal role in providing Internet services to the district administration and other departments in the district. At present, it is one of the most active District Centers in the State in terms of providing NICNET Connectivity and comprehensive e-Government Services to the citizen.

Major ICT Initiatives in the District

In addition to its usual Video Conferencing service and NICNET service, which interconnects various departments of the District Administration, NIC Changlang also provides a bouquet of e-Government services for benefit of the people of the district. Most important among them are:

Schedule Tribe certificate, Income certificate, Dependent certificate, Permanent and Temporary Resident certificates, Character certificate, Birth & Death certificate, Marriage certificates, Government ID Card, Inner Line Permit, Vehicle Registration Certificate, Driving Licences, Aadhaar services, Arms Licence, etc.

During the Covid-19 pandemic period ICT services of the District Centre, become all the more important. District Centre in collaboration with the State Centre implemented various services, which facilitated the emergency movement of people and goods. Support was also provided by the District Centre to help the District Administration in enabling large-scale Testing and Contact Tracing. Some of the important services provided during this period are:

- E-Pass application for essential Services implemented, for Vehicle Pass, Medical emergency Pass, and other entry Passes during COVID-19 lockdown time
- Mobile app for inviting orders and essential items delivery service during COVID-19 lockdown
- A web portal was also launched for the online delivery of essential goods from local shops to citizens during COVID-19 early lockdown time
- Aarogya Setu Dashboard and App were used for contact tracing information
- Constant coordination and support to Medical officers in uses of the Web portal and mobile App for transferring Rapid Antibody Test and RT-PCR data to ICMR portal for probable +ve/-ve cases, through Medical officer's mobile phones
- Constant coordination and support to Medical officers in monitoring, addition and updating of COVID-19 dedicated facilities, updating of positive cases, etc.

"Changlang NIC Website has become a single-window platform for accessing various citizen services, certificate applications, Tender notices, Beneficiary details of Government schemes, and tourism-related information & services.

24x7 IVR helpline for public grievances, e-passes, and online portal for goods delivery during Covid-19 pandemic have catalysed online delivery of citizen services.

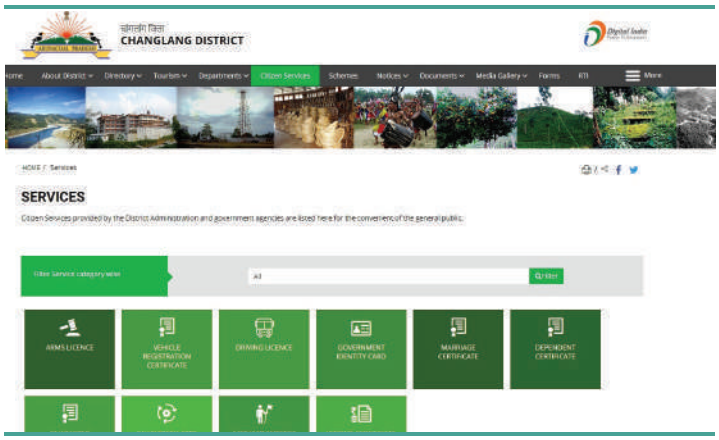
This has brought transparency in the working of local administration and ushered in digital governance"

Dr. DEVANSH YADAV, IAS
Deputy Commissioner
Changlang District, Arunachal Pradesh

District Website

A major initiative of the NIC District Centre is the District Website developed on the S3WaaS Platform.

▲ Home page of Changlang district website



▲ Citizen Services

▲ Inauguration of Jansuvidha Centre at Changlang District

The Website provides comprehensive information on the spectrum of domains like history, tourism, art, culture, handicraft, flora and fauna, access to utilities, government schemes and citizen services. In absence of a common state/ regional language in Arunachal Pradesh, the portal provides information only in English.

Another important component of the District Website is the exhaustive information on various schemes being operational at the district.

Exhaustive information on the following schemes is provided through the district website

- Arunachal Pradesh Entrepreneurship Challenge,
- Cluster Nutritional Kitchen Garden Scheme,
- Deen Dayal Upadhyaya Swavalamban Yojana,
- National Food Security Mission (NFSM),
- Deen Dayal Upadhyaya Bunkar Yojana (DDUBY) Scheme,
- Border Area Development Programme (BADP) Scheme,
- Comprehensive Handloom Cluster Development Scheme (CHCDS)

Citizen shows a keen interest in the information disseminated through the Website. Most popular among them are - Events, upcoming Events, Announcements, Notifications, Recruitments, Tenders, Advertisements, Supply orders and other notices. NIC District Centre undertakes special initiative to keep this information updated. Various services and information provided through the District Website have helped increasing transparency and efficiency in providing services. Dissemination of a wide variety of information has also brought government initiatives closer to people, which is important for remote Districts like Changlang.

▼ Receiving Digital India Award 2020

Awards and Accolades

- Digital India Awards 2020 on the theme "Excellence in Digital Governance – DISTRICT"
- Commendation Letter from Deputy Commissioner for Exemplary services during Simultaneous Parliamentary and Assembly Election to DIO
- Commendation Certificate from Deputy Commissioner for Exemplary services during Simultaneous Parliamentary and Assembly Election to ADIO.

Summary

Since its inception, NIC District Centre, Changlang is providing ICT Services to the District Administration and the Citizen. Through the District Website, NIC Centre is helping District Administration to disseminate comprehensive information and e-Services to the people of the District. NIC Changlang remains committed to bringing in new ICT innovation and Technologies to serve the District Administration better and fulfil the objective of the Digital India initiative.

For further information, please contact:
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NIC Changlang District Centre
1st Floor, DC Office Complex
Changlang - 792120
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Kamareddy District

Committed Towards Digital Governance

Edited by **REUBAN K**

NIC, Kamareddy District Centre is located in the premises of Collectorate, for providing ICT support and implementation of eGovernance Projects in the district and to provide the NICNET services for data transmission from District to various Departments. NIC District Centre has spearheaded the e-Governance in the district and building a strong foundation for better and more transparent governance and assisting the government's endeavor to reach the unreached.

K. Rajasekhar
Dy. Director General
& SIO
sio-ts@nic.in

Ravi Bandi
Scientist-B & DIO
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The District is bifurcated from the residual District of Nizamabad and formed as Kamareddy District on 11-10-2016 with (3) Revenue Divisions & (3) Municipality viz., Kamareddy, Banswada, and Yellareddy and (22) Mandals.

Kamareddy District is bounded on the North by Nizamabad District and the East by Rajanna Siricilla District and Siddipet District, on the South by Medak District on the West by Nanded District of Maharashtra State and Bidar District of Karnataka State. The Geographical area of this district is 3,652 Sq. Km. The District lies between 18 – 19'- 07" of Latitude and 78 -20'-37" Longitude.

ICT Initiatives in the District

eOffice (https://kamareddy.eoffice.telangana.gov.in)

eOffice (File Management System) has been Implemented in 50+ Departments, 3 RDO Offices, 22 Tahsildars Offices & 22 MPDOs Offices of the Kamareddy District.

The eOffice Inauguration was done on 15th August 2020 by Sri Pocharam Srinivas Reddy, Hon'ble Speaker Telangana Legislative Assembly & Dr. A. Sharath, IAS, District Collector, Kamareddy & B.B Patil, Hon'ble Member of Parliament in the Lok Sabha for Zahirabad constituency, Shri Venkatesh Dhotre, IAS, Additional Collector (LBs) Kamareddy District & Shri Ravi Bandi, District Informatics Officer, NIC Kamareddy has participated in the Occasion.

Benefits/ Advantages of the eOffice

- Enhance Transparency & Increase Accountability
- Assure Data Security and Integrity
- Transform the government work culture and ethics
- Promote greater collaboration in the workplace and effective knowledge management.

Other Key Initiatives in the District

District Website (https://kamareddy.telangana.gov.in)

NIC Kamareddy District Centre Maintains the District Administrations' website with regular Updation with the latest information received from the District Administration. The website provides enhanced user-friendly functionalities and interfaces, in compliance with the Guidelines for Indian Government Websites (GIGW) standard website norms and robust security standards.

Some of the salient features of the website are:

- CA contemporary look and feel & Responsive design
- Bilingual-localization (English & Telugu) with integrated search
- Sugamya easily accessible & Seamless cybersecurity
- Standardized information architecture with an easy content management system.

> NIC Kamareddy District Centre is playing a Vital Role in the Implementation of Various e-Governance Projects in the District. EOffice (File Management System) has been implemented in many Departments, in the District and Providing Transparency and Accurate Services in the District with the Training Provided by NIC District Centre.
>
> The Outstanding efforts and Proactive Support from the NIC Officers in Managing our District Website which was developed in S3Waas Framework are Exceptionally Well.
>
> I appreciate the efforts and commitment of NIC District Centre in providing technical support to the district administration for smooth and successful implementation of e-Governance systems.

Dr. A. SHARATH, IAS
District Collector & Magistrate
Kamareddy, Telangana

COVID-19

Support to District Administration, Health and Police Department In Implementation of ePASS for Interstate Lockdown Passes, Covid-19 Collection Centres for Various Tests, Covid-19 NHP Dashboard Support to update the Primary Contact Details & Arogya Setu APP Support to all the Departments.

Census Support

DIO is the Technical Member for the 7th Economic Census for Planning Department in the District. Necessary support is being provided by NIC District Centre when every required by the User.

▲ The eOffice Inauguration in Various Departments of Kamareddy District

▲ Shri Ravi Bandi, DIO , NIC Participated in Poster Release for 7th Economic Census at Kamareddy for Planning Department on 05/03/2020. Poster is being released by Dr. A Sharath, IAS, District Collector, Kamareddy.

▼ Receiving Digital India Award 2020

Disaster Management Support

(https://idrn.nidm.gov.in/)

ICT Support for India Disaster Resource Network Data Entry of various Resource Inventory Items at IDRN Portal by NIC Kamareddy District Centre.

Various Projects Implemented in District in Many Departments

- Crop Loan Waiver Scheme-2018 & Rythu Bandhu Scheme is implemented in Agriculture Department
- ePDS-Public Distribution System (PDS) in Civil Supplies Department
- e-Laabh- Benefits Management System in Fisheries Department
- Rashtriya Bal Swasthya Karyakram (RBSK) in Health Department
- Smart Performance Appraisal Report Recording Online Window (SPARROW) for IAS and IPS Officers
- National Database of Arms Licenses (NDAL) and Arms License Issuance System (ALIS) in Arms Section
- An Online Grievance Redressal System (PRAJAVANI) in All Departments
- Various ELECTIONS Support for District Administration
- eCourts in Judiciary Department
- e-Governance/ Email facility/ Video conferencing Support to all Departments

Awards and Accolades

Kamareddy District Administration (Collector & DIO NIC) is going to receive Digital India Award 2020 on 30th December 2020 from Hon'ble President of India under the Award Category-Excellence in Digital Governance-District.

Way Forward

The Various e-Governance initiatives have gone a long way in providing multiple public services transparently and efficiently. There is no doubt in the fact that National Informatics Centre, Kamareddy is the motivating factor behind the awakening of e-Governance Awareness and today things have moved in a full cycle. The District administration is now fully aware of the potential of the District informatics and takes initiatives in approaching National Informatics Centre District Centre for various ICT Services.

For further information, please contact:
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Khargone District

Citizen Centricity is the way forward for eGovernance

Edited by **AK DADHICHI**

Known for its hot weather conditions, Khargone is an emerging hub of Chili and Cotton production in Madhya Pradesh. The district mostly irrigated by the waters of River Narmada has Satpuda Hill range that borders with Maharashtra.

By developing need-based timely IT solutions NIC Khargone is leading the way in taking initiatives that qualitatively assists the administrative decision making and helps in improving the lives of the citizens. The new avatar of the district website on the trinity of 'Scheme Information', 'Online Services' and 'Forms & Contact information' together formed a semi-faceless information system for the Citizens of Khargone in particular and citizens of the state in general.

Rajendra Patidar
Scientist-C & DIO
patidar.rajendra@nic.in

Situated in the Nimad region of Madhya Pradesh, Khargone used to be known as West Nimad. NIC District Centre right from its inception has been the most significant entity in taking initiatives and helping district administration in almost all domains of its work. There were a plethora of applications developed for the computerization of various administrative tasks and process such as PPMS, ARMS, HRMS and One-day Governance are among the most notable of them.

NIC Khargone developed a series of web applications from WMS, CCMS, PBMS, m-Pahal, Pension Monitor etc. National projects such as NDAL-ALIS, IVFRT, NADRS, MCTC, National Tracking System of Missing Children, CCTNS, LG Directory, QuickSMS, DigiLocker, Jeevan Praman etc. are being successfully implemented. State projects such as Samagra, UTTARA, Scholarship Portal, Education Portal, Labour Portal, BRISC Portal, eDistrict Portal for public services, eUparjan, CM Tirth Darshan, mShiksha Mitra, VQRMS etc. have been implemented flawlessly.

ICT Initiatives in the District

The District Website (khargone.nic.in)

What beauty without substance! Therefore, the soul of our website is its content. Therefore, this website has the latest information on Govt. schemes in a simple and lucid form. The scheme data on our website empowers our citizens to open the gateway of opportunities with a single click at their comfort without visiting govt. premises. The ease at which the common man gets the information on schemes, online services and application forms makes the real difference towards face-less services delivery.

The website has good and quality information on 'One India' components such as Tourism, Places to Visit, How to reach, Festivals, Culinary Delights & Produce.

Citizen Participation

People visit the website. They write to use. They give suggestions and pose queries using the feedback form. We help them out with their queries and take appropriate action on their grievances and promptly reciprocate with email replies.

Outcomes

- Just like a faceless information system the website provides comprehensive information on Govt. Schemes such as scheme details, beneficiary criteria, scheme benefits, how to apply, and whom to contact if needed etc.
- The availability of scheme details along with its forms and online services is helping the citizens by not only saving their efforts and money but also preventing them from COVID-19 risks.

"NIC has always been a trusted institution to rely on for most IT interventions and solutions for the district administration to provide transparent and quick services to the citizens. The new S3WaaS based district website is one such example that focuses on citizen-centric information such as Schemes, Online Services and up-to-date contacts of important institutions. Efforts have been put to enrich the website by including themes on Produce, Tourism, and Culture. The ICT infrastructure and Video Conferencing Services of NIC have been commendable."

ANUGRAHA P.
District Magistrate and Collector
Khargone, Madhya Pradesh

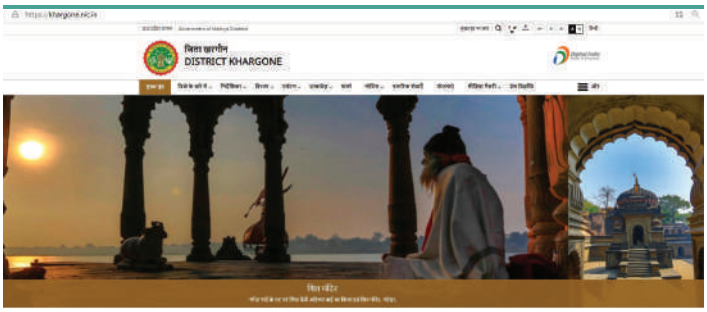
Geo-reference Based Works Monitoring System [WMS]

WMS is a unique project implemented using web-based and mobile technologies whereby all construction work details along with stage-wise Geo-Referenced images are captured. Work photographs with EXIF Information are the key to this system concept. Every work created on this system requires four images to be uploaded by the work agency engineer. The first photograph 'Site Photograph' which is taken before the work begins with latitude and longitude information is uploaded first and holds the key to transparency.

As of now more than 4650 works have been fully completed/ monitored using this system. Gwalior district of Madhya Pradesh is also using this application.

Court Cases Monitoring System

A web-based solution has been designed,



Home page of Khargone district website

Court Cases Monitoring System – A Case Entry Form

developed and implemented locally is being maintained for progress monitoring of various court cases of different courts of the district. All the pending court cases are entered and regular follow up entries as the case progress are being fed in the system. To date, as many as 1118 court cases are being managed by this web application.

Other Key Initiatives in the District

Cyber Security Awareness Campaign

NIC District Unit Khargone has launched a drive to educate govt. employees and college students to 'Cyber Security.' The self-motivated and self-designed program of awareness creation on 'Cyber Security' issues among govt. officers and colleges are one such activity where more than 800 participants benefited.

Polling Booth Mapping System (PBMS)

PBMS (http://dic.mp.nic.in/khargone/pbms/home.aspx) is a web-based application with SMS integration for geo-tagging of Polling stations and Poll day monitoring system successfully implemented in all the districts of MP during the Loksabha Election 2014.

Video Conferencing Services

NIC District Centre Khargone is actively providing quality video conferencing services at all levels. Owing to the Covid-19 pandemic the dependency of conducting meetings and training were solely on the Video Conferencing Services. From the webcast to VCs, from National to state levels and from District to block levels, the NIC Video Conferencing Services were proven to be a boon for district administration and governance.

Cyber Security Awareness Training by DIO Shri Rajendra Patidar to the Staff of Collector Office

Shri Gajendra Patel, Hon'ble Member of Parliament, Khargone, is interacting with Participants in DISHA meeting supported by NIC Video Conferencing System

Receiving Digital India Award 2020

Important Events organized

Khargone VISIT of Shri Nagesh Shastri, DDG & State Co-ordinator, MP

Shri Nagesh Shastri, DDG NIC, visited District Collector of Khargone, Mrs. Anugraha P. Innovation in IT, solution-oriented IT applications, Artificial Intelligence, Blockchain Technology and NIC's Contribution etc. were discussed during the meeting.

Shri Shastri was briefed by DIO Shri Rajendra Patidar about the works being done by NIC District Centre which were appreciated by him. Shri Shastri also visited the newly built District Collector office.

Awards and Accolades

- The Khargone district website has been selected for 'Digital India Awards' in the 'Excellence in Digital Governance – DISTRICT' category in the year 2020
- The project Works Monitoring System (WMS) received the 'SKOCH order-of-merit' award at India Habitat Centre, New Delhi by SKOCH group in the 'Innovative Technology Use' category in the year 2015

Way Forward

IT and ITES are an essential part of administration and governance. NIC District Unit Khargone would proactively provide quality information services and system to make lives better.

For further information, please contact:
DISTRICT INFORMATICS OFFICER
NIC Khargone, District Centre
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Khargone - 451001
MADHYA PRADESH
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eAbgari

End-to-End Solution for Comprehensive Transformation of State Excise

Edited by **MOHAN DAS VISWAM**

eAbgari has been the single most transformational factor in the state excise sector and has considerably increased the department's enforcement and regulatory capabilities through ICT driven process reengineering. Seamlessly integrating a wide array of innovative technologies - the web, QR codes, PUSH/ PULL SMS, Email, AI-driven Supply Chain Management, Chabot, GIS, Mobile Apps, Hand-Held-Terminal (HHT) based Track & Trace - eAbgari has significantly reduced service-delivery times and has exceedingly enhanced the government's regulatory capabilities.

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Mainak Mukhopadhyay
Sr. Technical Director
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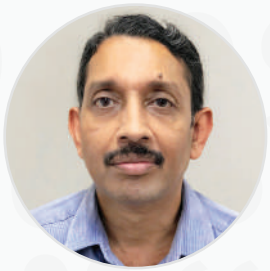
State excise is the 2nd highest revenue earning resource component in most of the states in India. It provides around 20 per cent of the share of the government's revenue in most states.

- Changing the fiscal environment in the Post-GST scenario and the utmost need for compliance with the FRBM Act to ensure sustaining long-run fiscal health through transparency in fiscal operations, the state governments have started to explore the possibilities of augmenting its revenues by mobilizing state own revenue resources through adoption of ICT driven schemes
- In most of the states in India, ICT enablement in State excise is in the basic stage. Presently, the states, with utmost importance, have started to explore suitable e-Governance solutions for adoption in State Excise (i) to arrest revenue leakage points and (ii) to control excise crimes for better revenue realization from state own revenue Source
- The eAbgari project is a strategic administrative reform initiative State excise sector leveraging state-of-the-art modern technology to provide an end-to-end solution in a workflow-based manner
- eAbgari project is built on Reduced discretion - Electronic workflow - Electronic service delivery methodology in state excise sector to achieve government's mandate of (a) eradicating the manufacture, distribution, supply and sale of illicitly distilled/ counterfeit/ non-duty paid/ spurious intoxicants (b) clandestine transport of rectified spirit (c) supervision for proper use of alcoholic spirits, including medicinal and industrial spirits, and life-saving narcotic drugs and (d) regulate to minimize the social and public health import while safeguarding the revenue collection from excisable articles
- With eAbgari, it has been possible for (a) Reconciliation of every drop of spirit imported or manufactured (b) Automated Supply Chain Management for excisable goods (c) Tracking duty evasion by generating a 360-degree profile of the Excise Licensees, Issued Permits & Passes for movement of excisable goods (d) Pendency checker for tracking process pendency at all hierarchical levels (e) Ensuring supply of life-saving drugs to CCUs within 90% reduced time
- The eAbgari project covers the core activities of State Excise e.g. (a) Excise Licensing (b) Label Registration of Packaged Liquor (c) Issuance of NOC / Permits/ Passes/ EVCs with status tracking at all hierarchical levels (d) Supply chain management using QR Code based EAL on Bottles/ Cases (e) Inventory Management at all Excise Nodes (f) Excise Revenue Management (g) Daily Preventive Raid Management (h) Excise Shop Inspection & proceedings Management (i) Functions of other Administrative wings
- All Distilleries, Manufactories, Distributors, Retail Shops and also Hospitals, Educational Institutes & Industrial Units connect eAbgari for Production/ Procurement/ Sell of alcohol. Seamlessly integrating a wide array of ICT technologies – Web, Mobile Apps, SMS & Email based Notifications/ Alerts, Chatbots, QR codes, HHT based Track & Trace, GPS mapping, Data Analytics, Blockchain (PoC done) - eAbgari has significantly reduced service-delivery time and has enhanced the government's regulatory capabilities
- Through the successful implementation of eAbgari in the last 5 years, West Bengal has earned the distinction of becoming the lead state in the



State Excise is a very important sector in terms of its contribution to the total revenue collection. Since it deals with a sin commodity, a demerit good, the regulatory aspects are also very important keeping the overall health aspects of the general public in mind. With eAbgari, all the processes of state excise are online, right from the production till the last retail stage. This has given the state government a host of data that has enabled them to go in for better monitoring activities as well as this has also made the ease to business as far as licensees are concerned. This computerised programme resulting in eAbgari has really made their life easier, has also resulted in better efficiency of the administration.

NAGESH SHASTRI
Deputy Director General
National Informatics Centre

country to implement all activities of State Excise under an umbrella e-Governance project. It has proved to be a classic example of a cost-effective solution in a comprehensive transformation of government processes for the empowerment of the Government and for ease of doing business as well

- Minimum consumption maximum revenue ensured - while consumption of intoxicants in West Bengal has risen by only about 5-6 per cent annually since 2014-15, the collection of Excise revenue has gone up from Rs. 3581 Crores during 2014-15 to around Rs. 12,000 Crores during 2019-20 registering a CAGR of over 38 per cent
- Inspired by the success story of West Bengal State Excise, many States have approached in recent time for replication of eAbgari. It is already implemented in Punjab, Odisha, Tripura, Sikkim &, Arunachal Pradesh. eAbgari project replication is initiated in Uttarakhand and Madhya Pradesh. Government of Jammu & Kashmir, Puducherry, Goa, Haryana, Chandigarh UT, Jharkhand, Maharashtra are exploring it for its early adoption
- The project eAbgari is developed abiding Bengal Excise (BE) Act 1909, the oldest Excise Act of India. All other State Excise Acts are framed based on BE Act 1909 with few state-specific modifications. eAbgari project is ready for replication in other States after needful customization in the shortest possible time
- eAbgari project has been selected for Productization to include it in the e-Gov App Store to make it available as a National Product.

Roadmap followed

- NIC engaged as ICT Consultant to conduct a thorough study of the manual system
- NIC submitted DPR advising following remedial measures:-
  - Technology oriented Government Process Re-engineering
  - Re-use of available ICT Infrastructure and systems
  - Online collection of data from the lowest level in the excise value chain
  - Periodic information collection for Criminal and breach cases for stronger control and enforcement
  - Stock inventory of spirit – both in bulk and packaged form
  - Ensuring multiple channels of communication including Online, Pull/ Push SMS, Email, Mobile Apps and 24x7 Helpdesk services for timely, simplified and transparent G2B, G2C, G2G services
  - Change Management:-
    - ◊ Formation of IT Cell
    - ◊ Re-Organization of Excise Training Cell
    - ◊ Training Calendar on ICT Awareness & Motivational Programs for all hierarchical levels of State Excise

Major Components

State Excise Licensee Issuance & Tracking System

Workflow-based system to Grant of New Excise License as well as Renewal of existing Licenses. New Applicants are authenticated through OTP & Email, whereas existing Licensees are authenticated through eAbgari user credentials. The process flow involves e-Payment of requisite Fees guided by eAbgari, uploading of relevant KYC documents through system-driven validations, e-Submission of Application to Range Officer, e-Issuance of Acknowledgement to Excise Licensee, e-Acting on Application by Excise Officer either to hold on or, to forward the Application to Excise Collector, e-Acting on Forwarded Application by Excise Collector to Seek Clarification or e-Issuance of Excise License.

State Excise Permit/ Pass Issuance System

For movement of Liquor within the state or for Import from Other States/ Countries, Excise Permits/ Passes are mandatory. The eAbgari automatically determines the type (Under bond, Duty Paid or Duty Bearing) of import/ transport/ export considering the nature of the license of the Consignee & Consignor. The relevant process flow involves e-Requisition for Import/ Export/ Transport of Molasses/ Bulk Spirit/ Packaged Liquor etc., Acting on the Requisition electronically by the Competent Authorities, e-Issuance of Bar-coded Import Permit-cum-Pass for Packaged Foreign Liquor printed on Security Paper, e-Receipts of Imported Consignment & automatic updating of Stock, e-Issuance of Excise Verification Certificate.

State Excise Mapping System

Google Maps are used in eAbgari innovatively for tagging of Excise Licensed premises to analyze scenarios like (a) Existence of liquor shop within restricted area (b) Concentration of an average number of liquor shops in a particular locality. Moving forward, the Google Maps service is also extended to crime locations/ illicit liquor manufacturing locations to enable better preventive measures and also in acting as a distance calculator between two locations using Haversine formulae.

Excise Brand Management System

Database of Packaged Liquor Brands establishes a linkage between the licensee and the brands registered by him/ her. The database contains all particulars of registered brands including Unique Product Registration Number, Registration Type (Fresh/ Renewal), Liquor Category, Kind, Type, Brand Name, Special Attribute of Container, Bottler Name, Country/ State, Address, Brand Owner Name, Country/ State, Address, Liquor Strength, Measure & M.R.P., Margins of Manufacturer, Wholesaler & Retailer, Registrant Name & Address, Global Trade Item Number (GTIN) of the Brand, Picture file of Labels & Container, Registration Fee Payment Details etc.

State Excise Stock Inventory Management System

This enables to manage real-time stock inventory of licensed premises as follows:- Manufactory: e-Receipts of Spirit through Import or Transport, e-Stock Inventory of Strong Spirit (SST) VAT, e-Issuance of Spirit to Blending & Reduction (BRT) VAT for production of a Brand of Specified Batch, e-Issuance of QR Code based Adhesive Labels for pasting on Packaged Liquor, e-Recording of Produced Packaged Foreign Liquor – Measure, Total Cases/ Bottles, e-Transfer of Produced Bottles to the Stock of Adjunct Bond. Warehouse: e-Receipts from Manufactory OR e-Receipts through Import from the Other States, e-Issuance of Bottles to Trades through De-bonding (Transport Pass) through a collection of applicable excise duties, e-Stock Inventory of Packaged Liquors.

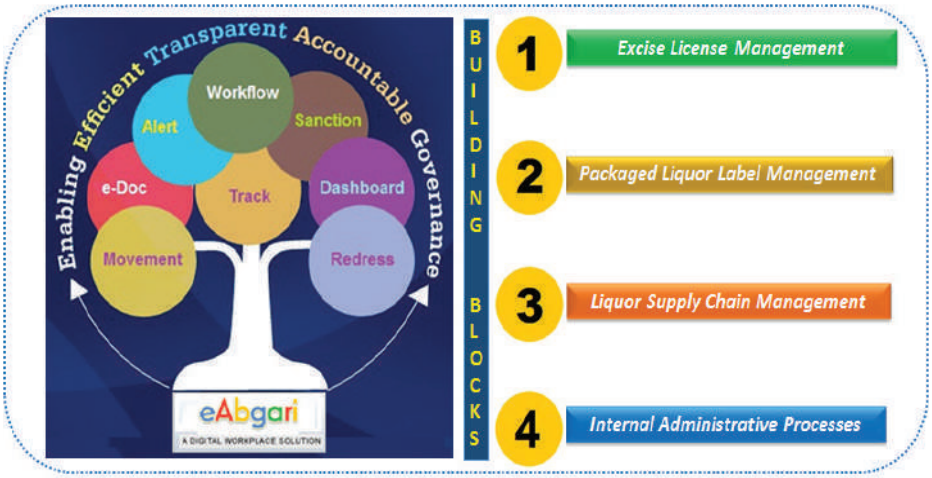
Trade

e-Receipts from Manufactory OR e-Receipts through Import from the other States, e-Issuance of Bottles to Trades/ Retails through Transport Pass, e-Stock Inventory of Packaged Liquors. Retail: e-Receipts from Trades OR e-Receipts through Import from other States, e-Issuance of Bottles to end consumers.

State Excise Supply Chain Management System

This is an end-to-end solution comprising of Registration of business associates, Automated

▼ Functional Architecture of eAbgari



Supply Order to Suppliers, regulate and monitor the movement of packaged spirits upon receipt at the warehouse and up to shipment to Retail Outlets, Release of payment to supplier on receipt of sale information from a retailer based on indentation, Invoice management, Tracking, reconciliation of bottles/ cases with alerts & exception reporting, Reporting and analytics of key operational & financial parameters, Management of supplies and inventories of packaged liquors, Integration with banking payment gateways etc. The system enables Track & Trace of Packaged Liquor through the adoption of Case & Bottle level QR Coded Labels & Hand Held Terminal (HHT) for ease in Dispatch, Receipts & Sales and thereby the Stock Inventory.

Home Delivery of Packaged Liquor

The e-Retail system is there under eAbgari to enable online ordering by Buyers (CoD, Online Payment) followed by home delivery of Packaged Liquor with an Order Tracking facility & Mobile App.

MAJOR INITIATIVES COVERED

eAbgari is developed as a rule-based technology-enabled system to undertake end to end operations enabling robust monitoring and control for:

- Information collection on criminal & breach cases for better enforcement measures
- Detect inefficiency & corruption
- Monitor performance
- Inculcate a sense of accountability in the functioning of dealing officials at each level of excise
- Intelligent decision support & audit to arrest revenue leakages
- Reconciliation of every drop of spirit manufactured or imported
- 360-degree profile of Licenses, Permits & Passes.

eAbgari implements Automation & Right of Service Act through (a) technology-driven business process re-engineering (b) single-point simpler excise tax collection system, digital collection & archiving of documents (d) empowering excise headquarters, field units & stakeholders to know the exact status of process (e) services at stakeholder's doorsteps (f) Grievance Redressal System.

Application suit of 62 e-Services

- Grant of New Excise License
- Renewal of Excise License
- Change in Excise Establishment Management
- Grant of Temporary Bar License
- NOC for Grant of License/ Late Closing from Police Commissionerate
- Shifting and Transfer of Excise License(s)
- Permission for Late Serving in Retail Outlets
- Registration of Brand & Labels of Packaged Liquor
- Daily Preventive Raid Reporting system
- e-POS: Daily Sales Reporting & detailed Inventory of Retail outlets
- Monthly Revenue Return from Excise Licensees
- Monthly Revenue & Intoxicant Consumption Report from SEs
- e-Chemical Examination Laboratory for handling samples and also aiding prosecution cases in Trial Courts
- Import of Molasses from other States
- Import of Bulk Spirit from other States
- Import of SDS, Methanol
- Import of Spirit for Medicinal purpose
- Import of Packaged Foreign Liquor (PFL)
- Export of Molasses to other States
- Export of Bulk Spirit to other States
- Export of Packaged Foreign Liquor (PFL) to other States
- Export of Packaged Country Spirit (CS) to other States
- Transport of Bulk Spirit within the State
- Transport of Packaged Foreign Liquor (PFL) within the State
- Transport of CSD FL within the State
- Transport FL from Custom Bonded Warehouse
- Transport of Packaged Country Spirit within the State
- Supply Chain Management of QR Coded Holograms till it's affixing on Packaged Liquor through Applicators
- Packaged Liquor Case level QR Code Generation & HHT based Supply Chain
- e-Retail: Home Delivery of Packaged Liquor
- Country Spirit Salesman Registration Module
- Court Case Monitoring System
- Retailer Shop Inspection & Misc. Case Monitoring System
- Excise Criminal Information System
- Public Grievance Monitoring System
- Excise Vehicle Bill Submission, Processing & Management System
- eBevco: Supply chain management of packaged liquor from manufacturing to wholesale warehouses of West Bengal State Beverage Corporation Ltd. (WBSBCL) to retail including payment of procurement costs by retailers and remittance of landed costs to suppliers using integrated payment gateways. The major components of eBevco are:- Registration of Suppliers (through Import & Transport), Automated Order for Supply based on Business Analytics, Indents for Supply by Retailers, Proforma Invoice by Suppliers & Warehouses, Online Payment Gateway for Payments by Retailers & WBSBCL.

Reach of the project

Though eAbgari is primarily targeted at businesses engaged in the manufacture, distribution and trade in liquor, as also the health care sector so far as procurement and distribution of life-saving narcotic medicine are concerned, the benefits accrue to the entire population. Citizen access eAbgari online/ mobile devices while applying for a license or intending to lodge a grievance or to check the authenticity of packaged liquor through scanning of QR coded holograms or texting the serial no. of the hologram to fetch product details as PULL SMS. Web services are made available in eAbgari to facilitate other administrative departments e.g. Commercial Tax, Police, Commerce & Industries for the exchange of data. Besides, the Excise Departments & Licensees of other states & union territories of India intending to import from West Bengal or doing export to this state are also covered by the eAbgari project. Nepal, Bhutan, Bangladesh and other foreign countries are also covered in eAbgari Supply Chain Management.

Stakeholders

eAbgari covers all stakeholders in the Excise Value Chain located in all states & abroad falling within the ambit of BE Act 2012. Primary Stakeholders of the project are:

- ~ 5,000 Excise Officials administering regulatory measures and engaged with enforcement activities to prevent loss of health & life
- ~ 7000 Excise Licensees for doing business
- ~4,000 Medical Hospitals/ Nursing homes to procure/ distribute medicinal alcohol/ life-saving drugs for CCUs
- ~ 100 Educational Institutions to procure spirits for research purpose
- ~9 crore Citizen of WB applying for a license or intending to lodge a grievance or for QR code-based authenticity of packaged liquor.

Secondary Stakeholders (a) Excise Nodes of Other States Importing/ Exporting with WB (b) All Banks through GRIPS portal for online deposition of excise duties/ fees (c) Other Administrative departments for exchange of data (d) Citizens of other States – to check the authenticity of packaged liquor produced in WB. To date, 548 crore e-Services are rendered.

Key functional areas

- 360-degree profile of Licenses, Registered Packaged Liquor Brands for better Excise License Management
- Automation in the issue of Licenses, Label Registration and NOC/ Permits/ Passes/ EVCs for import/ export/ transport – both under-bond & duty-paid and Tracking thereof
- Monitoring of execution & non-execution of issued NOC/ Permits/ Passes including revalidation & cancellation
- Dashboard, Pendency Checker at all hierarchical levels
- Real-time Stock Inventory of Spirit in Bulk, Packaged Liquor for Reconciliation of every drop of spirit imported or manufactured

▲ Hon'ble Union Cabinet Minister, Shri Narendra Singh Tomar conferring award for eAbgari project

- Supply Chain Management of QR Coded Holograms till it's affixing on Packaged Liquor Bottles through Applicators on Production Line
- Packaged Liquor Case level QR Code Generation & Hand Held Terminal (HHT) based Supply Chain from Bottling Plants till dispatch to Retail Outlets
- System driven intelligence reports for enforcement and managerial control and inventory management
- Monitoring of Enforcement activities, Court Case Monitoring, e-Chemical Examination Laboratory, Grievance Redressal
- Mobile App based solution to capture Real-time Sales at Retail Outlets (both Asynchronous & Synchronous modes) through scanning of QR Code/ GTIN
- e-Receipt of Excise Duties/ Fees in an integrated manner with Treasury Portal/ Bank and Pay Wallet System
- GPS mapping of State Excise Licensed Establishments
- eAbgari Mobile App for:
  - Sale by Retail Outlets through scanning QR Code/ GTIN
  - Checking Authenticity by Consumers through scanning QR Code/ GTIN
  - GPS Mapping of Excise Establishments
  - Daily Preventive Raid Reporting by Excise Officials
  - Reporting of excise related crimes by Citizens (along with Photographs)
  - e-Retail for Home Delivery of Packaged Liquor for usage by Buyers, Delivery Persons
  - MIS on Revenue Collection, DPR etc. for Excise Authorities
- QR Code Based Authentication of Packaged Liquor
- eAbgari Chatbot
- Reporting and analytics of key operational & financial parameters of State Excise
- Traceable Workflow with Status Information
- GPS mapping of Excise Licensed Premises across the State.

Emerging technology

- Successful POC on eAbgari with CoE, Bengaluru on Intel's Hyperledger Sawtooth for Blockchain using QR Code based Packaged Liquor Supply Chain of eAbgari during movement of Packaged Liquor from Manufacturers to Distributors and Distributors to Retailers
- Sensor driven Mass flow meter based system integrated with SCADA to monitor day to day operation in all plants in WB
- HHT & QR Code based Shipment & Receipt of Packaged Liquor Cases
- Data mining on historical data for showing a trend and future prediction & prescription in State Excise Supply Chain to (a) Anticipate Purchase Orders From Retailers (b) Supply Chain Planning forecasting (c) Automated OFS for Demand-Supply Management in Warehouses through overcoming supply flaws (overstocking or understocking) (d) Creating Supply Chain visibility and gaining supply risk insights (e) Analytics-driven purchasing recommendations to Retailers
- Chatbots for operational interactions with Suppliers & Retailers (Purchasers).

▼ Receiving Digital India Award 2020

Awards & Recognition

- Digital India Award, 2020
- National e-Governance Award, 2018
- Skoch e-Governance Award (Platinum), 2015
- CSI-Nihilent e-Governance Award, 2016
- Technology Sabha (Indian Express Group) Award, 2017, 2018

Way Forward

- AI-driven Supply Chain Logistic Management by tracking the real-time movement of shipments to calculate their estimated time of arrival, factoring the impact of weather conditions and natural disasters through Satellite data collection & its analyzing
- AI-driven purchasing recommendations to Retailers based on Image Recognitions of Liquor Containers & Labels
- Adequate overview of Supply Chain network (in case of Import/ Export) using Blockchain among the eAbgari implementing States
- Government of West Bengal has recently approved the proposal of setting up a Centre of Excellence on eAbgari (a joint initiative with NIC) in Kolkata powered by Artificial Intelligence, Big Data Analytics & Blockchain technology. The proposed CDA&C will work as a Development-cum-Support Centre of eAbgari & eBevco projects. It will identify, mentor, augment capabilities and promote cutting edge analytics solutions for the eAbgari & eBevco projects.

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eCabinet

Automate Cabinet meetings in paper free and virtual mode

Edited by **AK DADHICHI**

eCabinet/ eMantrimandal is a powerful software portal for State governments to conduct Cabinet meetings electronically and online mode. Developed by NIC, it maximizes the usage of technology in meetings and reduces paper use. eCabinet automates workflow activities of meetings; before, during and after. It is designed for smart tablets, with rich UI and UX elements, for ease of use. Push & Pull mechanism built-in portal ensures high security needed for Cabinet matters. eCabinet is another milestone in the Digital India movement and enables smart governance.

Cabinet meetings of State Govts have three stages (1) Pre-meeting - Schedule, inform offices, collect Agenda points, Finalize & put up to Cabinet for Approval (2) During Meeting - Recording Decisions are taken and (3) Post meeting - Outcomes of the meeting including MoM, Action Points, Directions to offices etc.

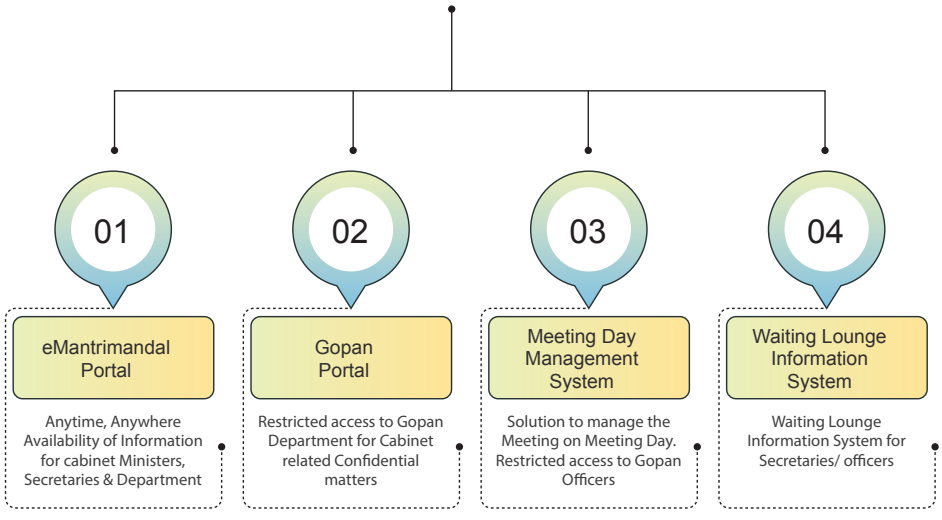
Conduct of Physical (manual) Cabinet meetings is a Race Against Time, involving multiple interactions between several offices and efforts till the last minute. Every meeting consumes huge resources of paper, fuel, manpower, time and efforts. It faces multiple challenges - information is not available in the right form at right time, Collecting & storing information is not structured, lack of Institutional memory over a time period.

The eCabinet software of NIC overcomes all major challenges in the conduct of Physical meetings. With eCabinet, physical papers are replaced with electronic data & the physical movement of documents between offices are replaced with a seamless electronic flow of information, in all stages. The Knowledge repository of meetings is a dynamically built-in database, facilitating quick and easy search & retrieval of decisions taken in meetings & review action taken on them. eCabinet leads to Good Governance.

The eCabinet (eMantrimandal) was launched by Hon'ble Chief Minister of Uttarakhand in Jan 2020, with the above objectives. The success of the project is gauged from the fact that all cabinet meetings of

> **The eMantrimandal is a milestone in Digital India programme, saving environment. I compliment National Informatics Centre, Uttarakhand for the innovative initiative.**
>
> **TRIVENDRA SINGH RAWAT**
> **Chief Minister**
> **Uttarakhand**

Components of Unified Solution


01
eMantrimandal Portal
Anytime, Anywhere Availability of Information for cabinet Ministers, Secretaries & Department
02
Gopan Portal
Restricted access to Gopan Department for Cabinet related Confidential matters
03
Meeting Day Management System
Solution to manage the Meeting on Meeting Day. Restricted access to Gopan Officers
04
Waiting Lounge Information System
Waiting Lounge Information System for Secretaries/ officers

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Uttarakhand from Jan 2020 have been held using eCabinet. Ministers and senior officers attend meeting with their Smart tablets, preconfigured with software and Agenda points & enclosures till the last minute. Many times Ministers attend meeting remotely through Video conferencing services.

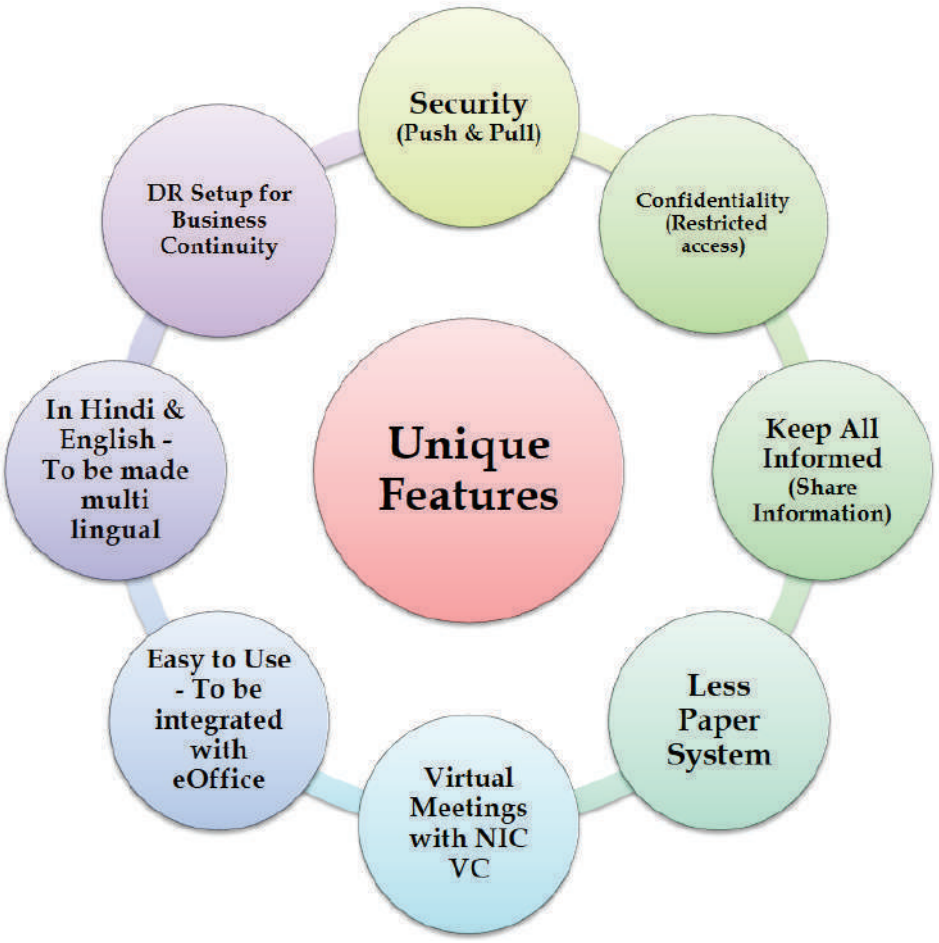
When the meeting is in progress in the meeting hall, decisions taken are synopsized electronically in the system and the progress of the meeting is updated live & displayed in large LED screens to officers. The proceedings of the meeting (MoM, Decisions taken, Press Release, Instructions to offices etc) are also automated with workflow for each and outcomes are disseminated quickly.

The institutional memory of cabinet meetings is built dynamically. Ministers and officers can search for decisions taken in meetings based on parameters and review action taken by offices and review progress in the system.

eCabinet, therefore, serves as a powerful tool for Govts to migrate from Physical(manual) meetings to Online Virtual meetings & bring in a Corporate style of functioning. Its relevance in the Covid-19 situation is huge, as it reduces the spread of Virus through the physical movement of papers and persons..

Features of the Product

- Replace paper-based conduct of Cabinet Meetings with electronic information
- Automate workflow activities before, during and after Meetings in Online mode
- Generate all Outputs & Outcomes of meetings electronically in every stage (Before, During and After)
- Designed & Developed for Smart Tablets, with rich UI & UX features, for ease of use by Ministers
- Enhanced level of Security in Triple layers, with Push & Pull features


Unique Features
Security (Push & Pull)
Confidentiality (Restricted access)
Keep All Informed (Share Information)
Less Paper System
Virtual Meetings with NIC VC
Easy to Use - To be integrated with eOffice
In Hindi & English - To be made multi lingual
DR Setup for Business Continuity

▲ eCabinet portal – Unique Features

▼ Hon'ble Chief Minister, Uttarakhand in a eCabinet meeting

- Build institutional memory & knowledge repository, enabling quick retrieval of Cabinet decisions
- Customized Dashboard for Ministers, Senior officers and Departments
- Available In Bi-lingual (Hindi & English) mode

Technologies Used

- **Front End:** DOT NET/AJAX/JQUERY/Bootstrap
- **Back End:** MS SQL Server
- **Mobile App:** Android based

Software Architecture

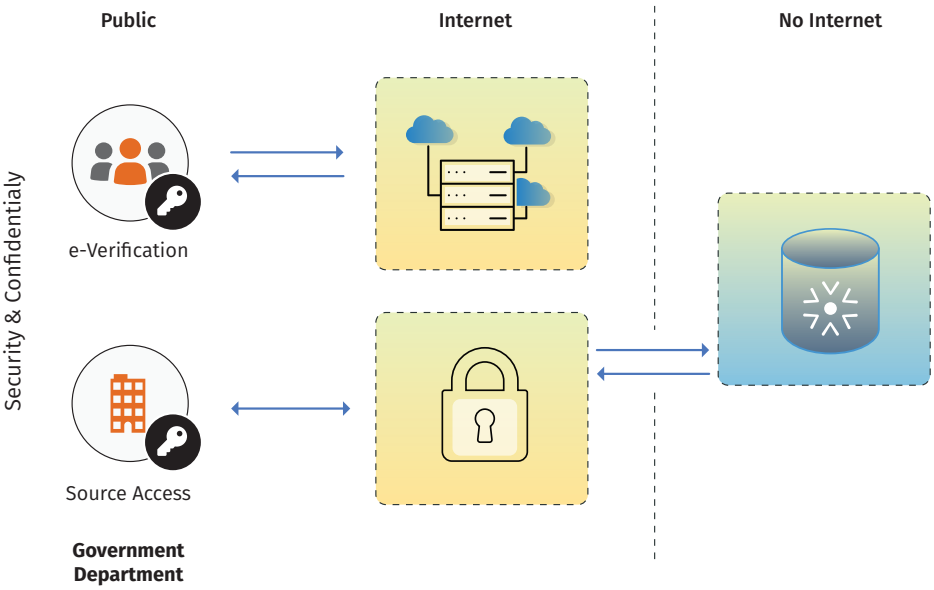
- Enhanced security with Three Layers
- System architecture designed with 2 Sub-systems :
  - Gopan for Cabinet dept in Intranet (Local LAN)
  - Departments portal in the Internet
- Seamless integration between the Two-subsystems with Push and Pull features
- Designed & Developed for Smart Tablets, with rich UI & UX features, for ease of use by Ministers
- Enhanced level of Security in Triple layers, with Push & Pull features
- Usage of Word processor of eOffice, for rich text features to generate electronically

Impact

- Saves huge resources of Paper, fuel and manpower. In 28 Cabinet Meetings in Jan - Dec 2020 :
  - Saving an estimated 10+ Trees (25+ Sets of Papers per Cabinet Meeting), 1000+ litres of Fuel for Vehicles to deliver meeting documents, 200+ Man Hours
- Online Data updation by Each, Information for all, leading to coordinated action
- Better decision making, Quick retrieval of Decisions

> **The eMantrimandal has resulted in Hon'ble Ministers getting information wherever they are and on time. It improves Government functioning & monitoring. I congratulate officers of Gopan Department and National Informatics Centre for this project accomplishment.**
>
> **OM PRAKASH, IAS**
> **Chief Secretary**
> **Uttarakhand**

▼ Triple Layer Security



▼ eCabinet meeting in progress

taken in meetings and review Action taken
- Enables Virtual participation of Ministers from anywhere, anytime with updated information
- Brings in Corporate style in the conduct of meetings, with standardization of data, formats and works.

Way Forward

- eCabinet Journey - From Application to Product – Implement in Pilot states - A Generic product for roll out in States
- Make it Configurable, multilingual as per needs of State
- Integrate with external systems (eOffice, Project Monitoring, PFMS, CM Dashboard etc)
- Plan for – 24 / 7 support, as Cabinet meetings are Mission critical
- Envisage & establish a Business model for Project roll out and Project Management

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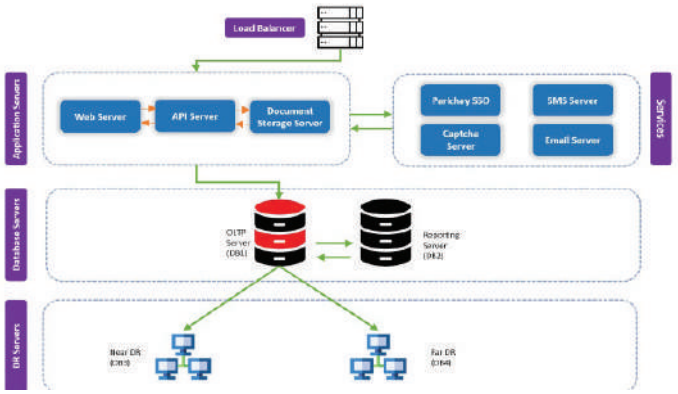
▲ Hon'ble CM Launching AWAAS



▲ eManeC portal Architecture

- 6154-Private Schools
- 25 -Printers
- 180- Book seller
- 10 –Transporters
- EBooks views : 154K Users on 362K Sessions
- 6 Book Depots, 1 Paper Depots & Head office are online
- Books sold online of Rs 6607548.15

AWAAS - Online Single Window Approval of Residential Colonies

AWAAS' is a Single Window System developed for approval of residential colonies. Land Diversion Certificates, Approved Documents and Permission for Colony Development will be issued within 100 days which was earlier taking more than a year time. All the required documents can be submitted online and the concerned departments will issue the No Objection Certificates for approval of Colony development permission. Applicants will be able to track the status of their application online and will get alerts through SMS.

Other Major Supports

NIC, Chhattisgarh extended support to the Department of Food to implement Pradhan MantriGaribKalyanYojana to help 57,65,935 families. Department of Agriculture implemented Rajiv Gandhi KisaanNyayYojana to transfer Rs. 4,500 crores to 18 lakh farmers.

During pandemic, with a view to reducing the footfall at RTO offices online citizen services were started whereby Vehicle owners could apply for Temporary and Special Permits, download auto approved Permits, apply for renewal of permit and duplicate permit without having to visit RTO office.

MITANIN Incentive Online Payment System for Asha Worker Chhattisgarh

Mitanin Incentive Online Payment System (MIPS) has been developed to pay incentives directly into the bank accounts of all Mitanin using PFMS. More than 69000 Mitanin (Asha Workers) of 27 districts of the state are being benefitted covering all the villages under the hierarchy of SHC, PHC and CHC.

Online Guest Teacher Recruitment

It was organized for Eklavya Model Residential Schools for both fresh and deputation candidates in the teaching and non-teaching category. It facilitates online registration of candidates as well as category-wise Merit list generation.

- **Fresh applications for Teaching** 29608
- **Fresh applications for Non-teaching** 68149
- **Applications for Deputation for Teaching** 166
- **Applications for Deputation for Non-teaching** 328

Computerisation of Paddy Procurement and PDS

NIC, Chhattisgarh has computerised the whole Food Grain Supply Chain from Paddy Procurement from farmer under Price Support Scheme, its storage, milling, receipt of CMR and distribution to 57 lakh ration card holders through 12,000 Fair Price Shops. The system has been operational since 2007 with continual improvement. The system has received eight national awards including Prime Minister Award for Excellence in Public Administration.

Transport

Vehicle Registration System (Vahan 4.0) and Driver's License System (Sarathi 4.0) have been implemented in the state of Chhatisgarh. During the pandemic, to reduce footfall at RTO offices online citizen services have been started whereby Vehicle owners could apply for Temporary and Special Permits, download auto-approved Permits, apply for renewal of permit and duplicate permit without having to visit the RTO office. Other online services include Transfer of Ownership, NOC, Hypothecation addition & termination, online payment of tax and fancy number auction.

Land Records

The Chhattisgarh Land Records Computerization project named BHUIYAN along with cadastral map management application BHUNAKSHA have been implemented in the state. Both the applications have come in handy for the citizens during the pandemic period. A citizen could view and download digitally signed Khasra (land ownership information p-11), Khatauni (B-1) and Parcel map. They could request online for signed documents (B-1 & P-11).

Commerce and Industries Department- Single Window System

To reduce the complexity of establishing and doing business in India, World Bank and DIPP come together with reforms for EoDB and based on implementation publishes the ranking of states in India. Being the nodal department for EoDB, Commerce and Industries joined hand with NIC Chhattisgarh to implement EoDB guidelines with the online system. NIC Chhattisgarh created an integrated online single window system from which various departmental services and incentives can be offered along with a single sign-on capability. Currently, more than 24 services are being offered through a single-window system from departments like Labour, Pollution Control Board, Excise, Fire, TCP, CSIDC, Legal Metrology, Electricity Board etc. and various incentives offered by Commerce and Industries department.

eManeC

It is an initiative of the Government of Chhattisgarh to promote procurement from local manufacturers to government departments and to promote manufacturing and entrepreneurship in the state. eManec portal is developed by NIC Chhattisgarh for government department purchasing through Rate Contract System. In this system, the state government departments can buy products and services from registered sellers based on fixed rates on Rate Contracts with CSIDC (Chhattisgarh State Industrial Corporation).

Way Forward

NIC, Chhattisgarh is committed to extending support to the State Government in its entire endeavour to the extent possible through appropriate Technological interventions.

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PSC-Soft

Public Service Commission Software for Transformation

Edited by **SARBJEET SINGH**

The PSC-Soft provides an integrated solution for the core functions of any State Public Service Commission with a focus on providing a user-friendly interface for applicants with a one-time registration facility. It is highlighted by the fact that during the initial implementation stage in HPPSC, the applicant queries have come down by 80%, signifying the user-friendliness of this feature-rich product.

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State Public Service Commissions, the independent and impartial Constitutional Authority, are functional in 28 States of the country. These Commissions have the responsibility of selecting best candidates for various State Government posts, in a professional, transparent and rightful manner as per desired skill/ qualifications, advise State Government on all matters relating to framing of Recruitment and Promotion Rules, changes thereof, principles to be followed in making appointments, recommending departmental promotions, etc.

The objective of PSC-Soft is to provide a comprehensive and integrated ICT solution for the core functions of the State Public Service Commission, with configurable business processes, formats, messages, language and interactions with stakeholders. The stakeholders include the PSC Administrative and IT officials, State Departments, Applicants and Citizens. The solution aims to provide transparent, accountable and trustworthy services in the selection of the right candidates for the right positions and serves as a decision support system for the PSC management.

Features

- Configurable functional parameters/ formats, user roles and workflow
- Online Dashboards for monitoring
- SMS/ Email based auto alerts
- One Time Registration of Applicants
- Online Helpdesk
- Security features to ensure data integrity
- Paperless, workflow-based interactions with stakeholder Departments

PSC-Soft Modules

PSC Administration and Configuration

The PSC can configure the software for use as per their business functions, assign roles to officials for software usage, define formats of various notifications/ letters/ admit card/ advertisements/ press notes, add local language labels etc. as requirements. The workflow software can be used internally by the PSC for processing all received requisitions related to vacancies, R&P rules and DPCs. A comprehensive dashboard displays summary of the works of the Commission.

In this ICT era, every State Public Service Commission is using some kind of IT solution for their candidate selection processes. However, having a comprehensive and configurable solution was the challenge. With the new solution, we aim to achieve the objective of a paperless Commission with a focus on reducing process times and better services to applicants. We hope to onboard the Government Departments soon to reap the full benefits of the new software.

ASHUTOSH GARG IAS
Secretary
HP Public Service Commission
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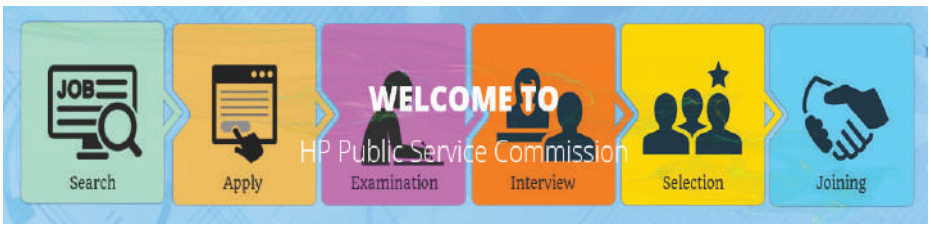
One Time Registration (OTR)

The OTR module is exclusively for the aspiring applicants who have to register only once through their Email ID, which is verified and serves as the unique User ID. The mobile number is also verified and can be changed in future if required. The applicants have to fill up their profile, qualifications, address, work experience and upload certificates/ images. After completion of these, their dashboard shows the vacancies for which they are eligible. The OTR module has details of applicants' applications, fees paid, SMS/ Emails received, admit cards, results,



PSC-Soft is another product in NIC's line-up, which has replication possibilities in State Public Service Commissions. Inputs have been taken from State PSCs and its demonstrations have been held for all State NIC and some PSCs. I hope that this software will help to reduce the candidate selection process time, facilitate applicants and switch internal functions to this ICT solution.

Dr. NEETA VERMA
Director General
National Informatics Centre

interviews etc.

Direct Recruitment

PSC-Soft has a configurable examination process with the creation of a rule-based dynamic advertisement, exam stages such as preliminary, written, mains, interview, screening followed by merit-based selection. Additionally, online allotment of exam centres, generation of admit card and submission of Candidate attendance, Answer key challenge and Data validation are part of direct recruitment.

Recruitment and Promotion (R&P) Rules

The Departments send their draft R&P Rules for approval by Commission and also send requests for modifications in these rules. These can be sent to the Commission in paperless mode.

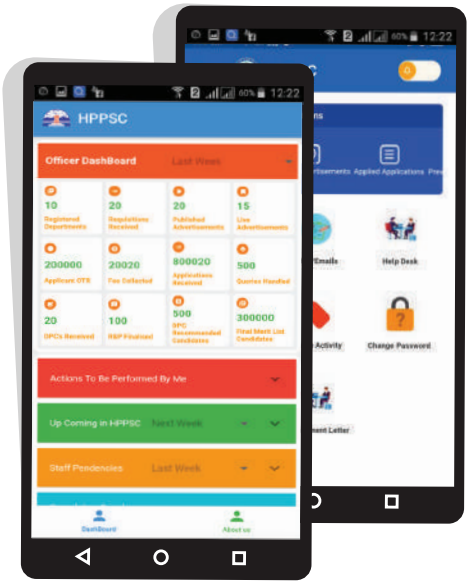
Departmental Promotion Committees (DPC)

The lists of eligible officers due for induction into class I or II services through the promotion are forwarded through software along with their ACRs and roaster for holding of DPC in the Commission. The meeting details and recommendations are captured in it.

Departmental Interface

All requisitions related to vacancies, R&P Rules creation/ modifications, DPC cases are forwarded to the Commission by Departments directly by using this module. The tracking status of every case sent to the Commission is available to Departments for monitoring purposes.

Mobile Apps



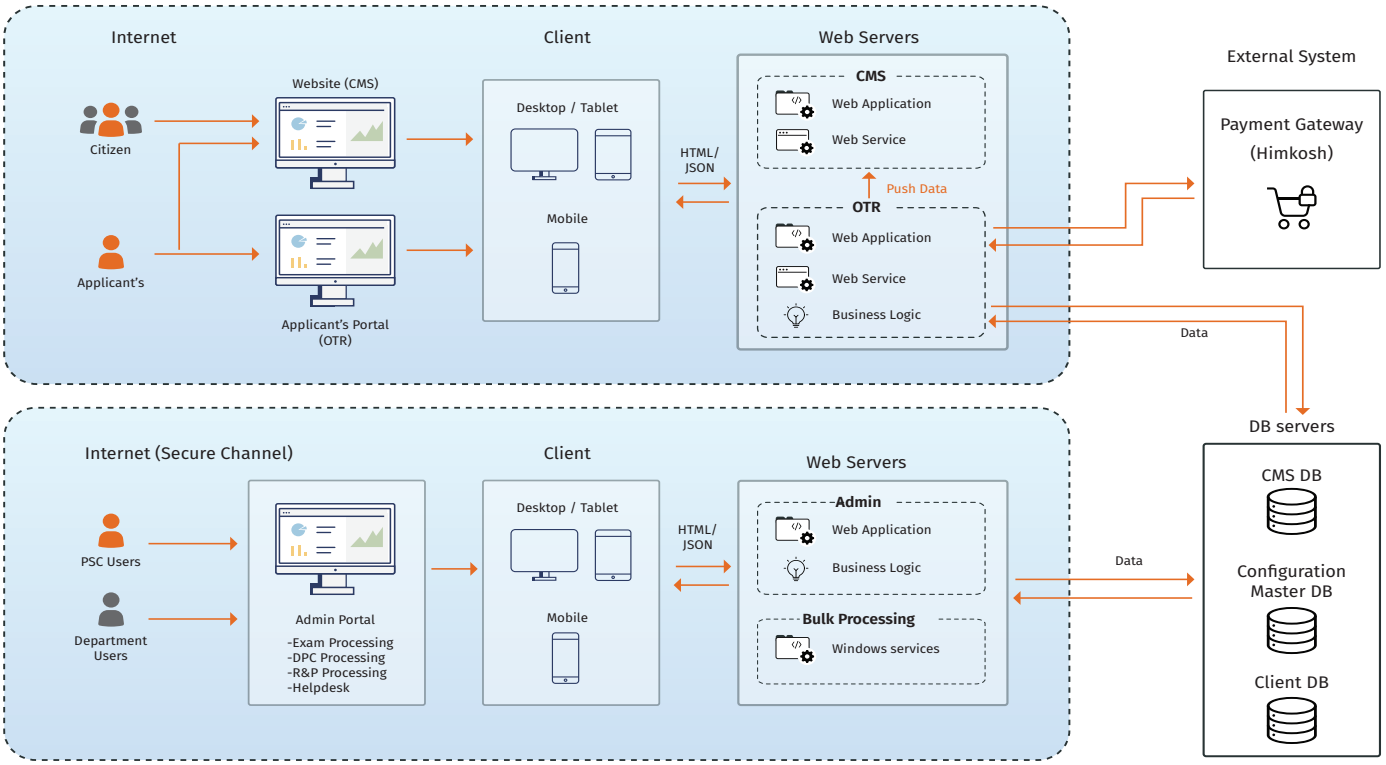
▲ HPPSC Mobile App for Applicants

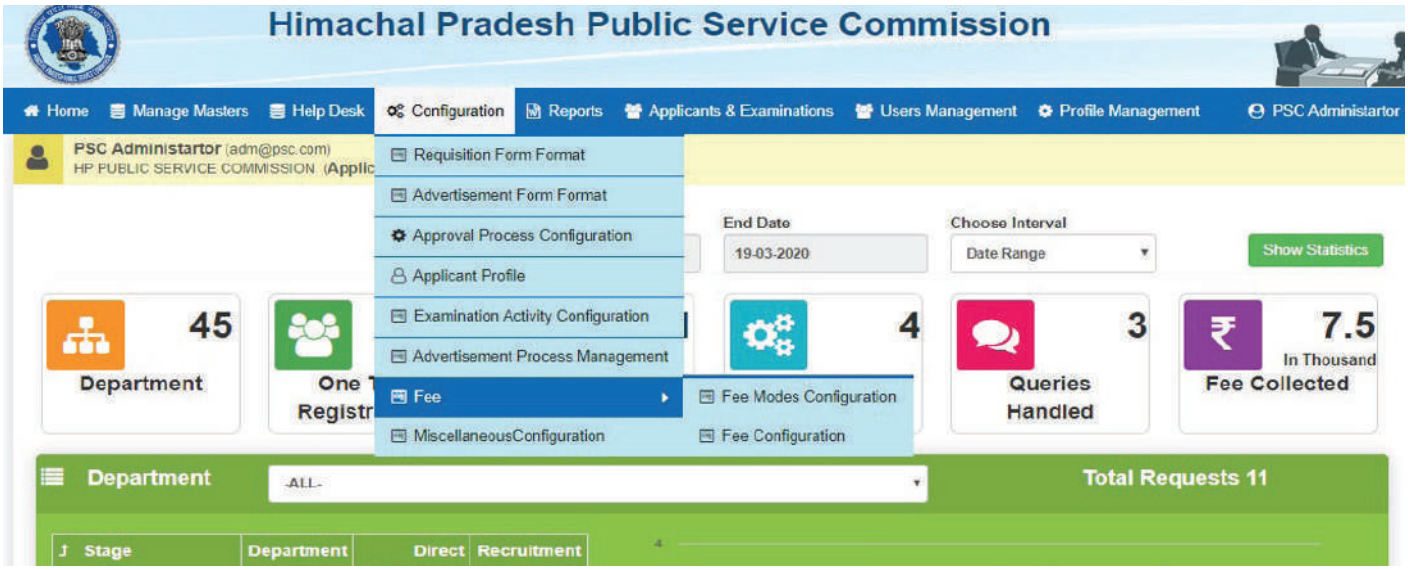
Two mobile apps have been made a part of this software, one for Applicants and the other for the PSC Management. The applicants can do all activities as available to them under the OTR module while the officers can monitor the receipt, processing, forthcoming exams/ interviews, new requisitions, DPCs etc. through these Apps.

Helpdesk

The integrated Helpdesk module accepts

▼ PSC-Soft Deployment Architecture





▲ PSC-Soft Dashboard Interface showing statistics, Data visualisation etc.

applicant queries through OTR, phone and email. All queries handled by the Helpdesk personnel are logged into the system. The system generates various reports to analyze the workload and efficiency of these personnel. The OTR queries are available to candidates in their account for future reference and record.

Intelligent Document Management System (iDMS)

This module has the facility to scan old records of the Commission, convert these into PDF files and do the text recognition so that all such records become searchable.

Public Website

The software has an option at every stage of its internal functions to send documents like advertisement and public notice to the website of the Commission for publishing at the user prescribed date/ time. These stages can also be configured and the public portal itself is CMS based

Technologies Used

- .Net MVC framework
- MS SQ Server 2017
- SMS/ Email integration
- Highcharts for dashboards
- Android/ iOS (Apple) mobile apps
- Payment gateway integration
- VPN based access for PSC Admin module

Software Architecture

The software architecture focuses on very high volumes of transactions on the OTR module and special security features in the internal module of PSC. A single source of data capturing allows for an integrated solution.

The hosting of the application requires the following resources/ actions at the State level:

- VMs-Web/ DB Servers, Backup, DR facility
- SMS/ Email and Payment gateway integration
- Security Audit

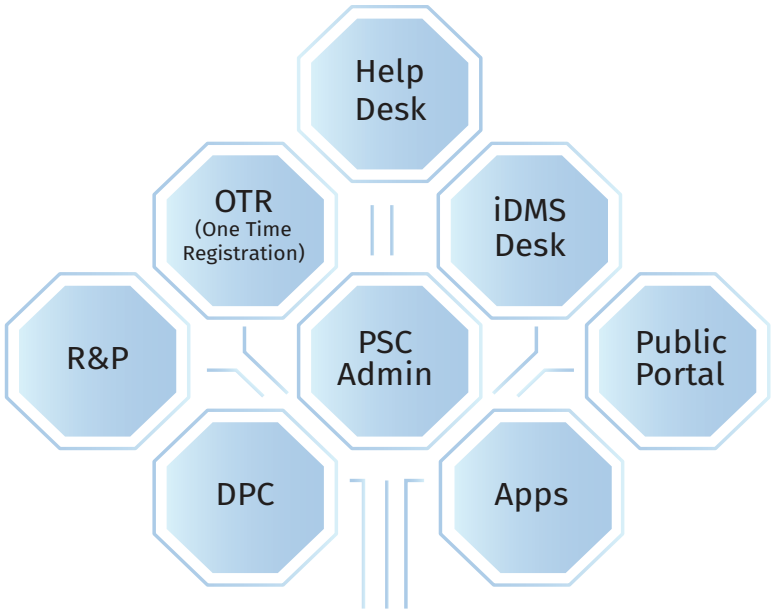
Benefits

- Reduced vacancy requisition processing time
- Secure, efficient, transparent, accountable paperless operations
- Cost reduction and Technology standardization
- Configurable & customizable processes/ formats
- Application Submission in minimum time as per eligibility of registered candidates
- User-friendly and Simple Interface for Applicants
- Integrated, single source of data collection
- Covers major functions of the Commission including end-to-end examination processing
- Maximizes benefits to applicants and Government

Way Forward

The PSC-Soft has the potential for replication in other State Public Service Commission, by hosting it locally in the Government data-centre. Most of the business processes and functions are configurable and hence replication will not take much time. A demo site is created for the desiring Commissions so that they may get to know the various functionalities of this software. In the meanwhile, work is on to include Robotic Process Automation (RPA) for verifying certain content in certificates uploaded by applicants and to provide some kind of guidance to applicants based on their qualifications and competitive exams undertaken.

▼ PSC-Soft Modules



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Load Testing as a Service

Self Service model for application load testing

Edited by **MOHAN DAS VISWAM**

Modern-day G2C services expect very high concurrency in production. To ensure that the quality of service matches the expectations of the end-user, it is vital to perform a thorough load testing of the application before its release. Load testing of such an application requires considerable investment in setting up a cluster of load generator servers, which may not be possible for all the projects. Load testing service makes it possible to test any application with desired user load without incurring any cost on license procurement or management overhead of provisioning a set of load generator servers.

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Load testing is a non-functional form of application testing in which we measure performance metrics and throughput against the expected requirements, industry guidelines and standards and examine the resources provisioned for the application. It simulates the behaviour of the application under both normal and at peak conditions by creating artificial traffic of concurrent virtual users on the application thereby identifying any bottlenecks in the system which might degrade the performance in production.

Load testing of an application is very important step executed before the deployment of the application in production environment.

Key advantages of performing load testing

- Estimation of infrastructure
- Performance measurement
- Minimize system downtime risks
- Identify inefficient code

A load testing project begins with the identification of test scenarios, quality parameters for acceptance, test environment setup followed by test script creation and execution with desired user load.

Technology Brief

Apache JMeter

The Apache JMeter™ application is an open-source Java application designed to load test functional behaviour and measure performance. It was originally designed for testing Web Applications but has since evolved to test many different applications/ server/ protocol types such as Web - HTTP, HTTPS (Java, NodeJS, PHP, ASP.NET), SOAP/ REST Webservices, FTP, Database via JDBC. It can be used to simulate load on a server, group of servers, network or object to test its strength or to analyze overall performance under different load types.

Components of JMeter

Test Controller or Test Workbench

Test Controller is a local machine where the test script is created by recording the browser actions using the Apache JMeter's recording functionality. Test Controller is also used to configure the load distribution on local or remote machines. For the greater user load, the test is configured to execute on remote machines running the agent service of JMeter.

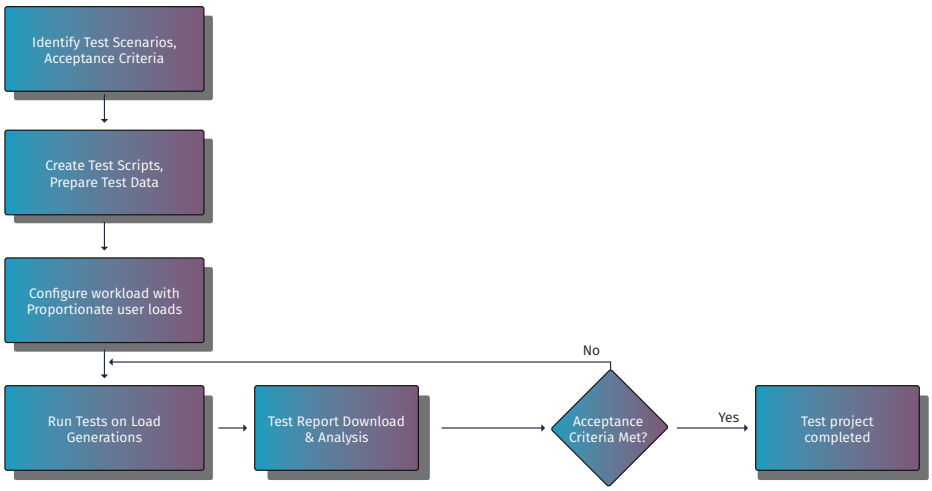
Test Agents

The load test agent machine is a remote machine with a high-end configuration that runs 'server' component of JMeter. The virtual user load is distributed to multiple agent machines through the controller and thus the test is virtually fired from remote locations. Once the test is completed, the agent machines send their results to the test controller that collects this data to create a detailed load test report which is available offline for further analysis.

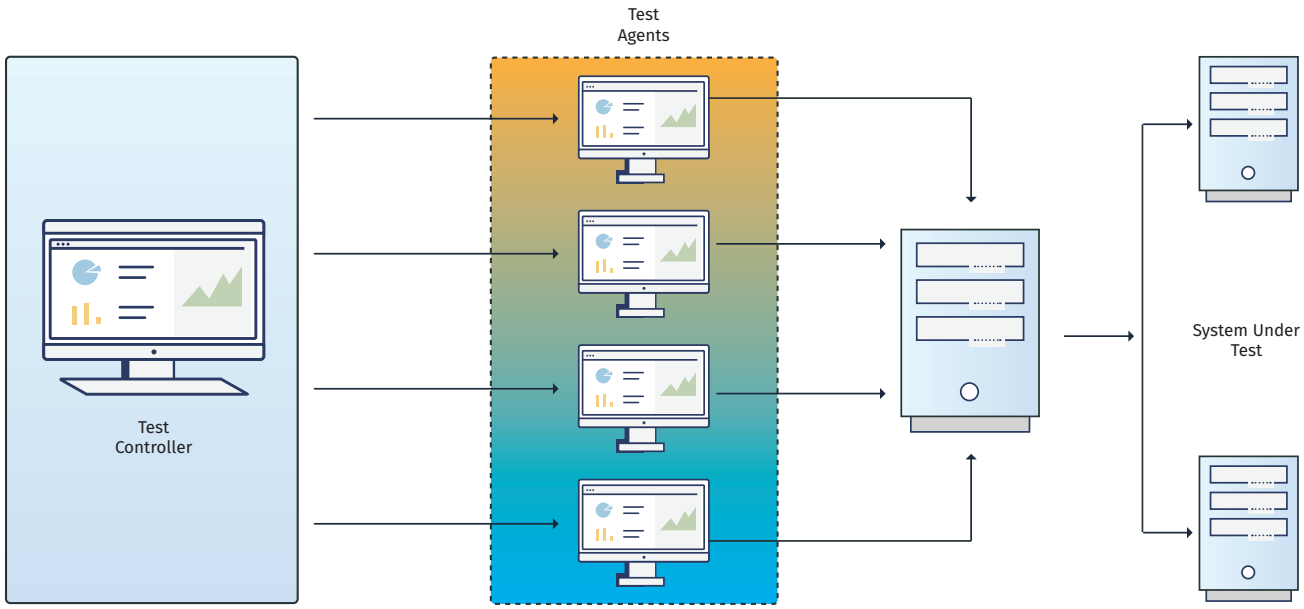
Load Testing as a service by NIC

The NIC CCC has provisioned Apache JMeter based load testing infrastructure which has multiple agent machines to scale up the concurrency up to 20K virtual users. The controller has been made available as a web-based application where user can upload the JMeter Test Script, execute the load test and download the report.

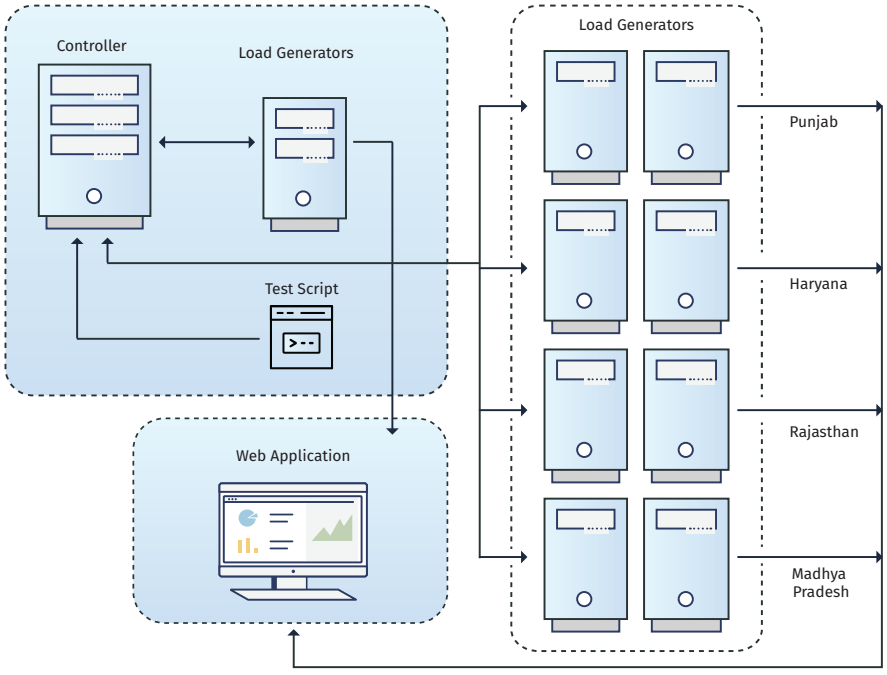
Load testing as a service application hosted at



▲ Load testing process flow



▲ Load Test in action



▲ Infrastructure Deployment

CCC which is using a farm of load generator servers at various locations for generating high concurrency traffic on the application as and when required. It is an online self-service at https://lts.ccc.nic.in and can be used by any project team for performance testing of respective application within NICNET.

Service 3-tier architecture

The core of the service is Apache JMeter, which is a leading open-source tool for load, performance and scalability testing. JMeter is a java application and not a web-based solution accessible via a browser which is a pre-qualification for use as a service. To overcome this, a web orchestration layer is developed on PHP with PostgreSQL as a backend.

While the front end application takes care of features such as user authentication, creation of projects, test resource upload and test report download, the DB server stores metadata of parameters to be passed to JMeter for Test Execution.

Parameters for Load test execution is captured by the web layer which runs the load test leveraging the command-line interface (CLI) of JMeter invoked through bash shell scripts. The test runs are configured to run from all the available load generators.

Availing Load Testing Service

Developing Test Scripts is the first activity to be carried out before availing of the service. After the scope of testing, the project is finalized and test cases are identified, the tester executes the application module step by step on the browser and records a series of HTTP requests using the recording controller of Apache JMeter to create the test scripts.

Once the JMeter Test script is created and tested on a local machine for a small number of users, the user can avail the Load Testing service to execute the script for greater user load. The service request can be created through the cloud portal. The credentials for the Load Testing service application (https://lts.ccc.nic.in) will be created by NIC-CCC Administrator and shared with the user for the execution of Load test with the desired concurrency.

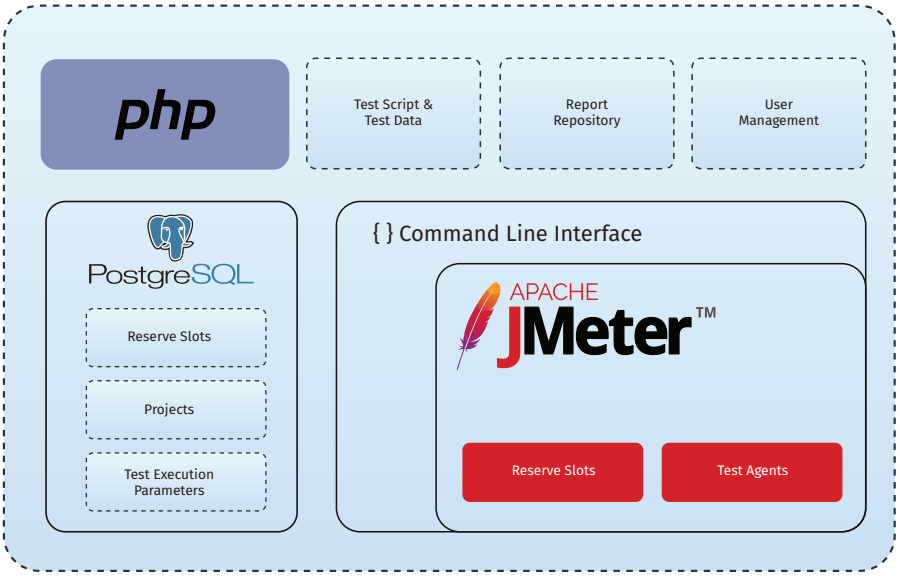
The overview of different modules of Load Testing Service application is as under:

Reserve Slot for Performance testing

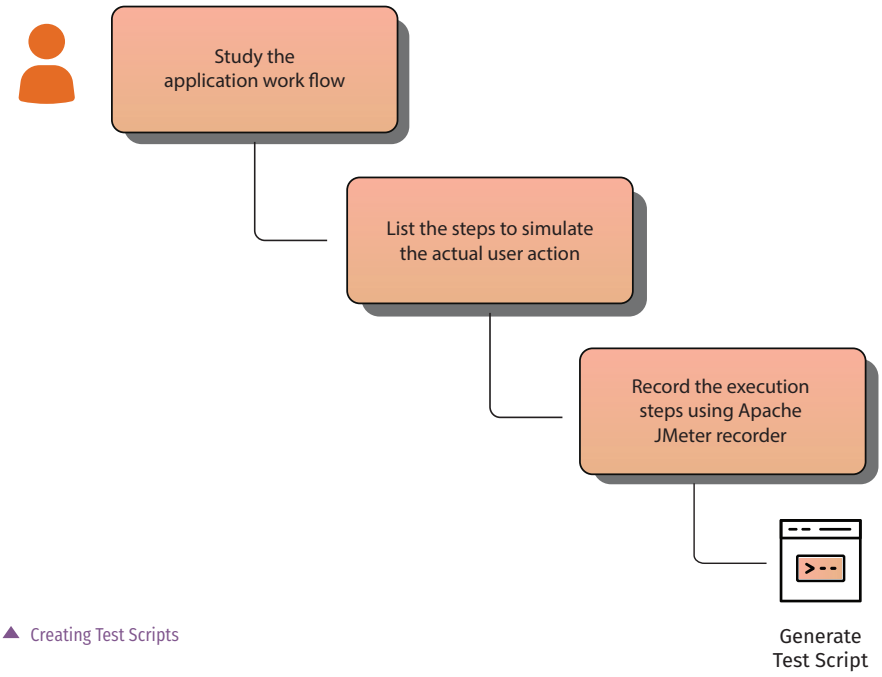
A slot of Test execution is the duration for which the load generator servers are available exclusively for the given user. The system will display the available slots. The user would select and reserve the slot as per convenience.

Create Project

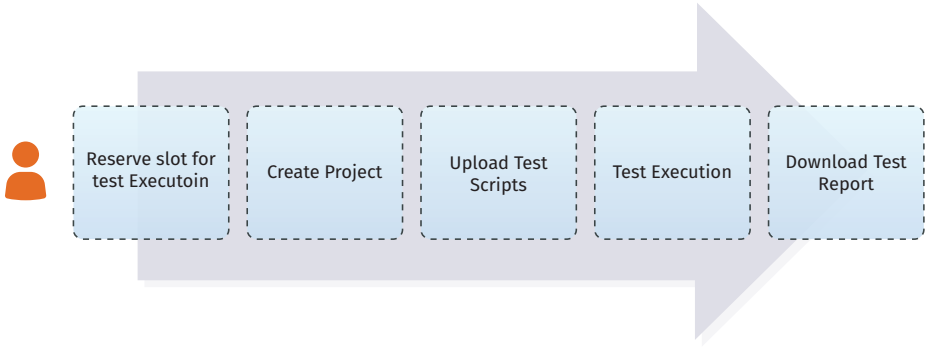
User can create a Performance test project by filling up the 'Create Project' form. User can create multiple projects and organize the test scenarios / scripts under relevant projects.



Architecture of Load Testing Service


Study the application work flow
List the steps to simulate the actual user action
Record the execution steps using Apache JMeter recorder
Generate Test Script

Creating Test Scripts



Modules of load testing service

Upload Test Script

User should test the script on this local machine for 5-10 users and ensure its completeness from all aspects. Once the script is ready to be uploaded, the user would log in to the application and upload the script under the project created. Test data would be uploaded similarly.

Test Execution

Test execution module will be available during the duration reserved. The user would specify the project, test script and enter the test execution parameters like duration, concurrency, ramp-up time etc and run the test.

Download Report

The test report may be downloaded by visiting the report download module post-execution. The download report module would be a repository of all previous test executions. Test report of the last test execution is made available as soon as the test duration is complete and the report is ready.

Benefits of Load Testing Service

- Available to all applications hosted in NIC data centres or Cloud
- NIC-CCC team shall provide training on writing test scripts and using the self-service model which makes it simple and easy to avail
- Archival of test reports done for future reference
- Being internal service therefore may be availed as many times as required at different stages of deployment
- NIC project teams need not hire an agency for test execution

Application Areas

The service can be availed by any NIC project team developing web/ mobile applications, APIs, web services to test their application with the desired concurrency and ascertain their readiness for production deployment. Simulation of production-like traffic would help to identify any potential issues in the application code which may lead to performance downgrade. It will also help in estimating the resources required to sustain the expected traffic without compromising on the response time. Being black-box testing, it is agnostic of the inherent technologies and frameworks used for development.

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Securing Mobile Applications

Best practices in Mobile Application Development

Edited by **MOHAN DAS VISWAM**

Android, iOS and hybrid apps are vulnerable to a range of threats, and businesses need to be protected from the risk associated with running mobile apps in an unprotected environment. This becomes more important when it is about the Apps for government. Platform-specific security best practices must be followed for robust and secure mobile application development.

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Internet and mobile usage in India is all set to cross the 900-and mobile usage in India is all set to cross the 900-million mark by 2023, with nearly two-thirds of the population estimated to have Internet access and a mobile device. Mobile apps are becoming the main medium of digital interaction. Modern-day users are on the move and they are utilizing mobile applications for most of the electronic transactions.

Mobile Application Threats

A smartphone user is exposed to various threats when they use their phone. Attackers exploit weaknesses inherent in smartphones or flaws in the application logic. Mobile apps are often the cause of unintentional mass data leakage. Client-side vulnerabilities can be exploited without physical access to the phone. Improper platform usage has been the leading mobile security vulnerability, which refers to the misuse of any platform-specific feature or failure to incorporate platform security controls. Mobile applications developed with default configurations are vulnerable to certain known attacks. It is important to know such vulnerabilities while developing mobile apps. Another most common vulnerability is insecure data storage. If an attacker can physically access the phone, the attacker can copy application data to a computer.

A mobile application resides completely in the user device. There are free tools available to decompile and regenerate source codes of a mobile application. An attacker can learn the business logic from the decompiled source code and can attack the IT infrastructure using the credentials taken from the application installed in the user device. Securely storing the secrets in a device is also very important for securing the IT infrastructure from various attacks. Platform-specific security best practices must be followed for robust and secure mobile application development.

Developer Challenges

Along with security, the privacy of user information is the primary concern for an app developer. A hacker/ intruder should be prevented from getting access to the critical data of the mobile application. The app must protect the following from a hacker/ intruder:

- Private, sensitive, and personal information
- Unauthorized access to the system
- Execution in a rooted/ jailbroken environment

A malicious user or hacker can use a rooted/ jailbroken device to install the application to study the logic and API information. The attacker can even create malicious/ fake apps targeting the APIs.

Mobile applications can be login based or without login, based on the usage and security of services provided by the enterprise. Login based applications can have the following authentication mechanisms in place, with one or more factor for authentication (specifically, what a user knows, has, and is), to determine the user's identity.

- Login with a username and password
- LDAP authentication
- Login using a unique Id provided by the enterprise (e.g. Aadhaar) along with two-factor authentication/ N- Factor (OTP, Biometric etc.)
- Social Media login (Login with known OAuth APIs of Google, Facebook, Twitter etc.)

To address the security concerns, following are the major challenges:

- Web API security
- Securely storing the secrets

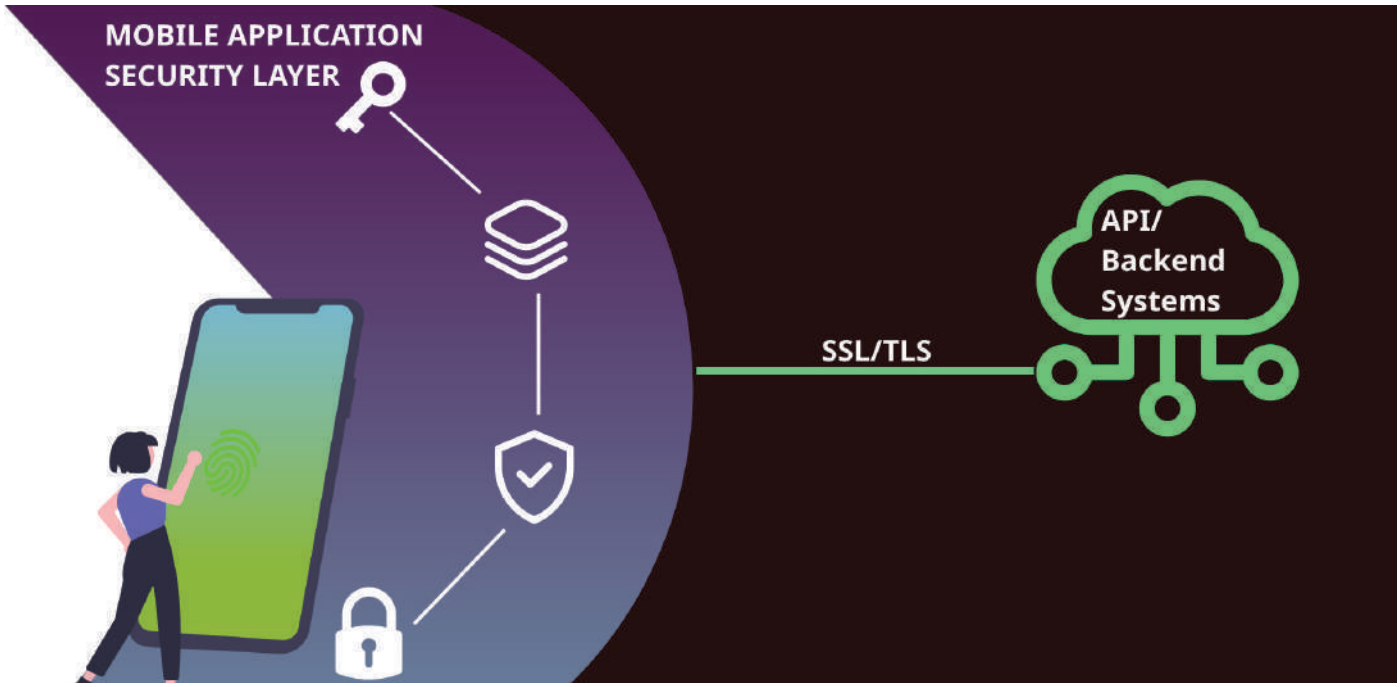
- Restrict running in rooted/ jailbroken device

Web API security

Mobile apps use APIs to interact with backend systems. API keys and tokens play an important role in application security, efficiency, and usage tracking. Best practices must be followed while selecting strong encryption standards. Transport Level Security (TLS) is a standard approach for securing an HTTP channel. To ensure message integrity, a message authentication code (MAC) for each request using the shared secret with an algorithm such as HMAC SHA-256 is recommended.

Storing Secrets

There should be a minimum-security mechanism in place for APIs used by remote non-sandboxed clients like mobile applications. Security of the APIs is partially dependent on the secure integration by the app. Different schemes can be in place to design a secured architecture. The factors affecting the security scheme depend on the data and business environments.



When a mobile app runs on a user device, it is necessary to store some user preferences and related configuration information in the user device itself to provide a seamless experience to the application user. It is very important to store such information securely on the user device. For example, the API keys for a web service, sensitive private and confidential information etc. It is always better to utilize the most secured storage option provided by the device operating system.

API keys and other sensitive information should be encrypted and stored in the device. The data can be encrypted using a key known to the client or encoded using an encoding scheme. The level of encryption can be decided based on the business and service provided by the enterprise through the application. Encryption logic can be built, on-demand, based on the following:

- **User provided PIN**
- **Keys shared through a secondary channel (OTP shared as SMS/ EMAIL)**
- **Keys securely stored in KeyStore**
- **Keys stored within the application code (hard-coded)**

It is not recommended to hardcode important application URLs in the application itself. Such URLs should be supplied to the application at run time only. Hardcoded values must be stored as byte arrays and can be converted to strings or of required data types at run time. It is recommended to store such hardcoded values in native layers.

The Encrypted Shared Preferences class is available in the Android Jetpack library. This library uses device-specific features for securely storing user configurations. Android Keystore mechanism also can be used to create keys that can be used for encryption purposes. A named key can be created in keystore, which by default is accessible for the app which created the named key, which can be used for device-level encryption and decryption. Best practices must be followed to make the process faster as cryptographic operations are normally time-consuming. In the case of iOS applications, a keystore must be used for securely storing application-specific secrets.

App in a rooted/ jail broken device

Jailbreaking is the process of removing software restrictions put into place by Apple on devices that run the iOS operating system. Similarly rooting in Android is the process of removing software restrictions put into place by Google and gaining the ability to access the entire operating system. A legitimate app running on a jailbroken or rooted mobile device is more vulnerable as it can expose sensitive user data. Platform-specific methods are there to detect a jailbroken or rooted phone. There is no one-size-fits-all solution for detecting jailbroken or rooted devices. There are attestation service providers who remotely evaluate the devices, whether the request is coming from the genuine app running on a genuine Android device. Attestation services may be used in the application if the business demands it.

Hiding Business Logic

Obfuscation mechanisms make it difficult to understand business logic. In software, the obfuscation of code is the process of modifying an executable so that it is no longer useful to unauthorized parties such as hackers but remains fully functional. Mobile application code, wherever possible, must be obfuscated before deployment. There are a few tools related to Android Studio such as R8, ProGuard and DexGuard. R8 is a free tool that is included in Android Studio.

Another method is to use NDK in android and write business logic/ codes using C/C++. Decompiling and getting the source codes from NDK compiled files are very difficult.

User awareness

Security depends on users. It is also important to educate the end-users regarding vulnerabilities that can be caused by installing apps from untrusted sources. Even legitimate apps from reliable marketplaces can include high-risk security issues. These apps can steal user information and configuration from other applications installed in the device. The security implementation in any system needs revisit and improvements regularly with increasing threats in the cyber world. Device owners must take responsibility for protecting the data they store in mobile applications. But user precautions will still fall short if developers leave vulnerabilities in their applications.

Mobile app security is the measure and means of defending mobile applications from digital fraud in the form of malware, hacking, and other criminal manipulation. The OWASP Mobile Security top 10 (https://www.owasp.org) may be referred for more awareness about the current mobile security issues.

References

Centre for Competence for Mobile App Development Kerala has published a document titled 'Secure API Integration for Mobile Apps'. The document explains use cases and best practices along with methods for securely storing secrets in the device. This document is available in the digitalNIC Platform of NIC.

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Elector Search
Himachal

Elector Search Himachal Mobile App is developed for State Election Commission, Himachal Pradesh (HP) by NIC, Himachal Pradesh. The Electoral Rolls are prepared by the respective Electoral Registration Officers (SDMs) and Assistant Electoral Registration Officers (BDOs) under the superintendence, direction and control of the State Election Commission (SEC) to hold elections for Panchayati Raj Institutions (PRI) and Urban Local Bodies (ULB). These Electoral Rolls are prepared using Electoral Roll Management System (ERMS) software developed by NIC Himachal Pradesh for State Election Commission, Himachal Pradesh. The rolls are being prepared and maintained using this software since 2010.

The next general elections for PRI/ ULB is scheduled for January 2021 in HP and the work of Electoral Roll publishing is in the final stage.

The Electoral Rolls are prepared Ward/ Polling Station-wise and are published on the web after each revision. The app helps electors of the state to search their name in these rolls to find out the exact details of their vote. They are provided with the District, Block/ ULB, Ward, Polling Station (wherever valid), relative name, age, EPIC number, House No, their ward and ward extent etc. The user has the option to either use free text search or in case the user is sure about the exact constituency (Panchayat Ward or ULB Ward), the user may select the location where the name needs to be searched.

The web API is based on an elastic search to provide speedy results. The app is available both on Android and iOS.

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https://play.google.com/store/apps/details?id=nic.hp.erms
https://apps.apple.com/in/app/elector-sec-hp/id1482490168

Bhagyakeralam

Bhagyakeralam is an Android mobile application for Lottery Agents and citizens who buy Kerala Lottery Ticket. A buyer can check whether the lottery ticket is genuine or not by reading the QR Code. One can verify the prize eligibility after the Draw using this app. It also provides a facility to check the status of the claimed prize and different stages of the payment process. The app is introduced for the Lottery Department of the Government of Kerala.

Bhagyakeralam is the citizen interface for the Lottery Information System (LOTIS). LOTIS is a workflow-based software by NIC Kerala for the use of the Kerala State Lotteries Department. It includes Scheme management, Draw management, Variable data generation, Print order, Issue note generation and Centralized distribution, Agent Registration Service, Sales Counters, Result entry, Prize processing, Prize disbursement and E-payment of prize money to the winner's bank account.

As a part of the security enhancement for the Lottery tickets printing, an AES encrypted code is embedded in the QR code and printed on the tickets. The decryption is done in the LOTIS server and is protected with a secure decryption key. The encryption key is regenerated for each draw. The Mobile App uses QR Code Scanning to achieve all its functionalities. The QRCode scanning in mobile App is implemented using an open-source ZXing library.

The 'Bhagya Keralam' mobile app provides the following services:

- **Verify the authenticity of a ticket**
- **Check the Draw and Prize-winning status**
- **Check the prize claiming status**

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https://play.google.com/store/apps/details?id=gov.kerala.lotis

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Visit the Mobile App Store at
https://egovmobileapps.nic.in

Poll Manager
for the Kerala Local Body Election 2020

During the Kerala Local Body Election 2020, an Android mobile application, Poll Manager, was used for data collection from the Polling Stations at predefined intervals on the Pre-Poll and Poll Day. The Poll Manager mobile app was widely appreciated for its ease of use and the quality of output produced. The app was used for the management of pre-poll day and poll day activities based on the field level reports. The app provided a feature 'SOS' which enabled the Presiding Officer/ First Polling Officer to immediately report any issues which stalled the poll process. The app also provided a communication plan with a direct dialling facility in an emergency.

The mobile app was primarily used by the Presiding Officers, First Polling Officers and Sectoral Officers. The presiding officer or first polling officer has to update 21 questions that indicate the poll readiness and polling progress. The questions were simple Yes/ No type or to give poll counts. The UI was simple and easy for even a novice user. The sectoral officers were also given access to the system wherein they could see the status of update of all the polling booths assigned to them. They were also provided permission to update the answers, where polling stations were facing connectivity issues. The app was supported by a portal that delivered updates and analytical data to the higher authorities. The authentication to access the App was based on the mobile number and One Time Password (OTP). The app was made available in the Google Play store for the users to download.

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https://play.google.com/store/apps/details?id=in.nic.kerala.election

eBhugtan
Himachal Pradesh

In Himachal Pradesh, all the payments are made in electronic form by the Government to its Employees as well as the private vendors like contractors and other business entities. These payments are initiated by the concerned Drawing and Disbursing Officer and after going through the process of clearance, the final payment is made by the Government Treasuries through electronic mode to the bank account of the receiver. The complete Integrated Finance Management System is computerized by the National Informatics Centre, Himachal Pradesh for the Department of Finance, Himachal Pradesh.

It is the right of the citizen to know the payments and receipts received with details of all bills and heads. In this era of mobile computing, a paperless solution with easy access to all the necessary information by the citizen would be an ideal solution. Taking this fact into consideration, as per the requirements of the department, NIC has proposed a solution in the form of a mobile application. Bhugtan mobile app helps the end-user, the private contractor or any other business entity as well as the Employees and Pensioners of Government of Himachal Pradesh to get the details of all payments made by the Government to them. The user has to add all bank accounts in which the user receives Government Payments. On successful addition of a bank account, the app provides Month wise as well as DDO wise list of payments user has received for any selected financial year. The user can also drill down bill details against each payment received. The app has helped pensioners as well as contractors to trace their payments easily.

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https://play.google.com/store/apps/details?id=nic.hp.vendorpayment&hl=en
https://apps.apple.com/us/app/ebhugtan/id1302791514

GST-INV App Kerala

Suppression of actual invoice data is one of the major fraudulent activities by the dealers. It is very difficult for the department to check and identify every invoice issued by the dealer. To tackle this issue, it was decided to provide an alternative mechanism to the public in the form of a mobile app to share the invoices they receive from the dealers. Hence the GST-INV app was developed for the State GST Department of Kerala to capture the invoices issued to the public by the dealers. The citizen can register themselves by providing their mobile number and OTP. After that, the GSTIN of the dealer who issued the invoice can be entered and the details related to the dealer will be shown. After verification, the public can enter the invoice details and upload the scanned copy of the invoice. Thus the GST-INV app is developed for public participation in data collection by uploading the invoices they receive from their daily transactions. The data thus collected will be shown to the department for detailed verification and further action.

In a nutshell, this app is intended for public incorporation in State/Central revenue collection and is aimed to encourage the public to demand bill on every purchase. The GST INV app will help the State GST department to ensure that the tax collected by the dealers through the invoices are accounted for and remitted to the Government. It is expected that the tax revenue increase with the popular usage of this app.

The mobile app was designed and developed by National Informatics Centre for the State Goods & Service Tax Department, Government of Kerala. The Android Mobile App is made available in the Google Play store to the citizen for easy availability.

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https://play.google.com/store/apps/details?id=com.business.gstpublic

Hon'ble Chief Minister Uttar Pradesh closing Remarks on "Sustainable Development of Purvanchal" via Video Conferencing from Circuit House Moradabad

A national webinar and seminar were organized from December 10 to 12 in Gorakhpur University campus under the leadership of CM Yogi Adityanath to prepare a blueprint of the overall development of Purvanchal. After meeting with all MLAs and dignitaries of BJP of Moradabad Commissioners on 12 Dec 2020, Hon'ble Chief Minister gave his closing remarks for a webinar on "Sustainable Development of Purvanchal" through video conferencing. In presence of Shri Sanjay Arora TD/DIO and Shri Ankit Chauhan ADIO NIC Moradabad, installed a complete VC solution at the circuit house and coordinated this VC with NIC UP State Unit, NIC Gorakhpur. NIC Moradabad's 34 Mbps leased line was diverted from NIC Moradabad to Circuit House Moradabad for seamless connectivity and VC experience.

Hon'ble Chief Minister during the Video Conferencing

NIC Moradabad's efforts were highly appreciated by DM Moradabad for the smooth conduction of VC at the Non-NIC site i.e Circuit House.

- Ashesh Kumar Agarwal, Uttar Pradesh

Inauguration of "Grievance Redressal System" in Agartala Municipal Corporation

Service of "Grievance Redressal System" for Citizens in Agartala City was inaugurated on 8th December 2020 by Shri Biplab Deb, Hon'ble Chief Minister of Tripura in presence of Shri Prafullajit Sinha, Hon'ble Mayor, Agartala Municipal Corporation, Shri J.K. Sinha, IAS Secretary Health and Family Welfare, Shri Kiran Gitte, Secretary Urban Development Department, Dr. Siddharth Shiv Jaiswal, IAS. Municipal Commissioner, Agartala Municipal Corporation. The inauguration was done in a programme held for "Swachh Tripura Swasth Tripura". The online application was designed and developed by NIC Tripura under the eMunicipality project.

Hon'ble Chief Minister of Tripura inaugurating "Grievance Redressal System"

- Arnab Pal, Tripura

Hon'ble Chief Minister, Chhattisgarh inaugurated Chhattisgarh State Food Commission Portal

Hon'ble Chief Minister of Chhattisgarh Shri Bhupesh Baghel inaugurated the website of Chhattisgarh State Food Commission developed by NIC Chhattisgarh on 18th November 2020. In his address on the occasion, he said that the schemes related to food and nutritional security will be continuously monitored and evaluated through the portal of the Commission. Secretary, Food & Civil Supplies department, Dr. Kamalpreet Singh, IAS welcoming the dignitaries briefed about the functioning of the Commission. The portal will facilitate State Food Commission to monitor the implementation of the Nutrition Dietary Support Scheme at the BPL rate to the Public Distribution System, Mid-Day Meal Scheme, Supplementary Nutrition Diet Scheme, Pradhan Mantri Matru Vandan Yojana and Hostel Ashrams. The complaints related to these five schemes will be resolved promptly in a quick and transparent manner. The dignitaries present on the occasion include Hon'ble Minister (Food, Civil Supply and Consumer Protection, Planning Economic and Statistics, Culture) Shri Amarjeet Bhagat, Chhattisgarh State Food Commission Chairman Shri Gurupreet Singh Babra, Chairperson of the State Women Commission, Dr. Kiranmayi Nayak, Chairman of the State Minorities Commission Shri Mahendra Chhabra, Shri Pradeep Chaubey and the Managing Director of the State Civil Supplies Corporation Shri Niranjan Das. The website has been developed by the State Food Commission and NIC team in a very short time.

Hon'ble Chief Minister, Chhattisgarh inaugurated Chhattisgarh State Food Commission Portal

- Y.V .Shreenivas Rao, Chhattisgarh

Haryana Chief Minister, Shri Manohar Lal reviewed the progress of Human Resource Management System (HRMS)

Haryana Chief Minister, Shri Manohar Lal reviewed the progress of HRMS

Haryana Chief Minister, Shri Manohar Lal directed the officers concerned including the Boards, Corporations, Universities etc. to upload the data of all the employees on the Human Resource Management System (HRMS) by the concerned Nodal Officers by November 30, 2020. The HRMS application is designed and developed by NIC-Haryana.

The Chief Minister was apprised that the transfer orders will be issued through HRMS only otherwise the same will not be valid and no relieving and joining report will be generated by the system. Even temporary transfer within the Department for a limited period will also be made through HRMS.

In the meeting, Shri D. S. Dhesi, Chief Principal Secretary to Chief Minister, Shri Vijai Vardhan, Chief Secretary, Haryana, Shri V. Umashankar, Principal Secretary to Chief Minister, Shri Vijayendra Kumar, Principal Secretary General Administration Department, Smt. Ashima Brar, Deputy Principal Secretary to Chief Minister, Shri Deepak Bansal, DDG & SIO, NIC-Haryana and senior officers from different departments were present.

- Deepak Sawant, Haryana

Launch of 'Online Release Orders & Billing System' for Directorate of Information, Public Relation & Languages, Haryana

Launch of 'Online Release Orders & Billing System'

The Hon'ble Chief Minister Haryana launched the "Online Release Orders and Billing system for Information, Public Relations and Languages Department, Haryana on 14th Dec 2020. The software has been developed by NIC Haryana to fully computerize the whole process of media plan generation, release orders and bill processing for print media advertisements issued through DIPR Haryana. The software will benefit all Haryana Government organizations and the print media. Following are the features of the software:

• Role based access to the client organizations and News Papers. • Provision to send requests/ indents for Classified, Display and Tender (Indicative) Advertisements • Role based access to various officials of the DIPRL and SAMVAD for approval of media plans and bills • Separate Release Orders for state wise Newspaper Editions. • Auto generation of indicative advertisement by combining multiple requests from client organizations • Provision to send bills to Boards and Corporations for direct payment to Newspaper agencies (In case of classified Advt. of Boards and corporations) • Integration with treasuries through an E-Billing system developed by NIC etc.

The software has been developed in-house by NIC-Haryana and DIPRL Haryana.

- Deepak Sawant, Haryana

Dr. Neeta Verma, DG, NIC addressed the Valedictory function of "Gov Tech-Thon 2020"

Dr. Neeta Verma, DG, NIC addressing the Valedictory function

National Informatics Centre (NIC), IEEE Computer Society and Oracle organized Gov Tech- Thon 2020 commencing from October 30, 2020, to November 1, 2020. This would be launched under the Ministry of Electronics and Information Technology (MeitY).

Dr. Neeta Verma, Director General, NIC while addressing the Valedictory function of Gov Tech-Thon 2020, said that this virtual hackathon displayed a unique combination of Social Sector and Emerging Technologies. She also highlighted that the Hackathon has enabled the use of Emerging Technologies for social inclusion, empowerment of people & overall upliftment of the nation. NIC provides ICT and e-Governance support to the Government. It is playing a key role in delivering the services under the Digital India initiative.

In the Valedictory function of "Gov Tech-Thon 2020", Dr. Savita Dawar Deputy Director-General, National Informatics Centre introduced the Challenges & Winners of this virtual hackathon. She also highlighted that technologies like AI and Blockchain can help to solve the problems in Agriculture, Education and Transport sectors.

- Informatics News Desk, NIC-HQ

Hon'ble Prime Minister of India Inaugurates Atal Tunnel Rohtang: ICT Support by NIC HP

Shri Narendra Modi, Hon'ble Prime Minister of India dedicated the Atal Tunnel, Rohtang to the Nation on 3rd Oct 2020 at the South Portal of Tunnel in Kullu District, Himachal Pradesh. The Tunnel is strategically important as it provides all-weather road connectivity to Lahaul and Spiti District of Himachal Pradesh and reduces the distance between Manali and Leh by 46 km and the travel time by almost four to five hours.

Shri Rajnath Singh, Hon'ble Union Minister for Defence, Shri Jai Ram Thakur, Hon'ble Chief Minister, Himachal Pradesh, Shri Anurag Thakur, Hon'ble Union Minister of State for Finance and Corporate Affairs, Cabinet Ministers of Himachal Pradesh, Chief Secretary, DGP and important dignitaries were present on this occasion.

NIC District Units of Kullu and Lahaul & Spiti provided the ICT support during the visit of Hon'ble Prime Minister at 4 locations of SASE Helipad, South and North Portals of Tunnel and at Sissu. NIC set up the Camp Office and Media Centres at these locations. NIC officers worked day and night to set up these offices.

Hon'ble Prime Minister of India dedicating the Atal Tunnel, Rohtang to Nation

Shri Brijender Dogra, DIO and Shri Rajeev Kumar, ADIO Kullu set up the Camp office and Media Centre at North and South portals of Atal Tunnel. At Sissu, Shri Pratul, DIO Lahaul and Spiti with team arranged two systems secured these from virus threats, installed printers/ scanner/ Fax(MFP). They installed a 10 KVA UPS and five 1 KVA UPS at Camp office and Media Centre respectively. The temperature is below zero degrees in Sissu during morning and evening hours. Efforts of NIC officers have been appreciated by District Administrations of both Districts.

- Ajay Singh Chahal, Himachal Pradesh

Mitanin Incentive Online Payment System for Asha workers in Chhattisgarh

As per direction of Hon'ble Health Minister Shri T.S. Singh Deo and under the guidance of Mrs. Renu G Pillay, Additional Chief Secretary, Health and Family Welfare Department, NIC Chhattisgarh State Centre developed Mitanin Incentive Online Payment System (MIPS). With initiative and continuous monitoring of Mission Director, Dr. Priyanka Shukla, National Health Mission, this system was implemented on a Pilot basis in Abhanpur block, Raipur District covering all the villages under the hierarchy of SHC, PHC and CHC. After successful implementation in one block, the software was deployed for all the 69000 Mitanin (Asha Workers) of 27 districts in the entire state. With the help of this software, all Mitanins have been covered to pay the incentive directly into their bank accounts.

The Login page of the Application

- Y .V. Shreenivas Rao, Chhattisgarh

DG, NIC addressed the Responsible AI for Social Empowerment (RAISE 2020) Virtual Summit

Dr. Neeta Verma, Director General, NIC highlighted the innovative use of Artificial Intelligence and some of its prominent applications in e-Gov solutions and services during a session on "AI for All-Partnerships for Making AI Accessible & driving Innovation" at the RAISE 2020 Virtual Summit on 8th October 2020.

The RAISE 2020 virtual summit is a Global Artificial Intelligence Summit organized by the Government of India in partnership with Industry & Academia. The virtual global summit was inaugurated by the Hon'ble Prime Minister Shri Narendra Modi. The summit provided a platform for global meetings of minds to exchange ideas and charter a course to use AI for social empowerment, inclusion, and transformation in key areas like Healthcare, Agriculture, Education, and Smart Mobility amongst other sectors.

DG, NIC addressing the RAISE 2020 Virtual Summit

In her address, Dr. Verma emphasized the role of NIC in partnering with the Government at Central, State, and District level for the delivery of eGov services. To further strengthen the partnership NIC has established the Centre of Excellence (CoEs) in Artificial Intelligence (AI), Data Analytics, Blockchain, etc. These CoEs are primarily focussing on the aggregation of these services in the Government for better Governance or delivery of services.

- Shashi Kant Pandey, New Delhi

Launch of CCTV-ITMS in Smart City Dharamshala, Kangra, Himachal Pradesh

Shri Rakesh Kumar Prajapati, IAS, Deputy Commissioner, Kangra launched the CCTV based Intelligent Traffic Management System (ITMS) at Dharamshala on 5th November 2020. NIC has developed ITMS, which is integrated with eChallan application of the State Government. It has been implemented on pilot basis in Smart City Dharamshala, District Kangra Himachal Pradesh. ITMS plays a key role in shaping the city traffic to the next level by reducing traffic violation. This system will eliminate the need for physical deployment of law enforcement officers on the road and will work on a 24x7 basis. Shri Vimukt Ranjan, SP Kangra is the brain behind this initiative.

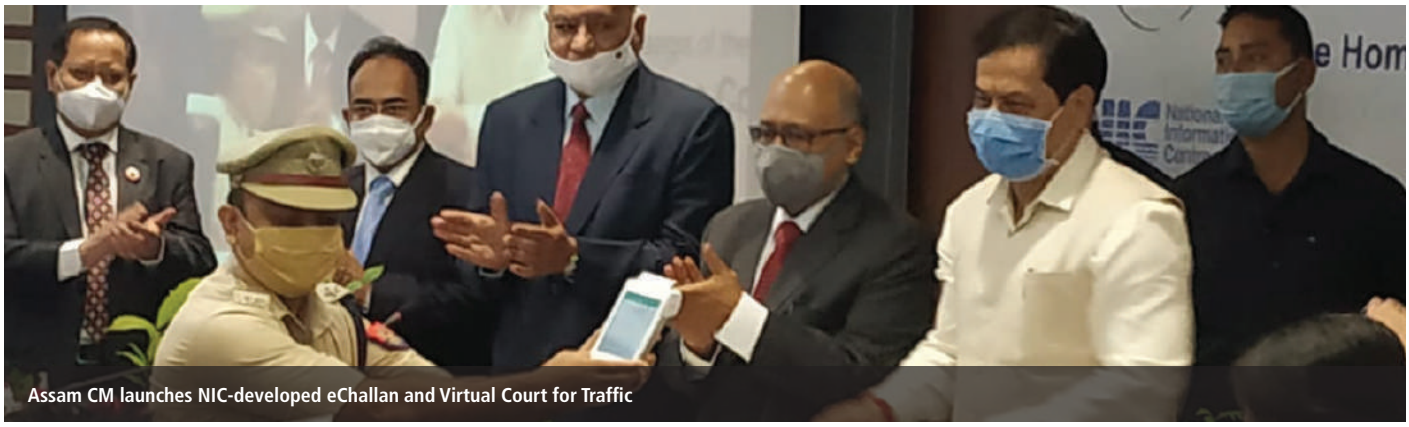
ITMS covers Over Speed Violation Detection System (OSVD), Automatic Number Plate Recognition (ANPR) System, No Helmet Detection System (NHDS) and Triple Riding and various other traffic violations in real-time. ITMS plays a key role in shaping the city traffic to the next level by reducing traffic violations. ITMS is using artificial intelligence to manage traffic and nab motorist flouting traffic rules including bikers travelling without a helmet.

The online facility is integrated with HimKosh and enables citizens

Shri Rakesh Kumar Prajapati, Deputy Commissioner, Launching the ITMS System

for making online payment for compounding the eChallan. The facility of SMS has been integrated into this system which gives the status of delivery of SMS to the authority, for further appropriate action. District Administration has appreciated the efforts made by NIC in the implementation of this project. Once it is successfully implemented, more locations in Dharamshala Town, other Sub Divisions and other Districts of HP will be taken up. Shri Bhupinder Pathak, DIO Kangra and Project Coordinator, with his team, provided the requisite support in its customization and implementation.

- Ajay Singh Chahal, Himachal Pradesh



Assam CM launches NIC-developed eChallan and Virtual Court for Traffic

Assam CM launches NIC-developed eChallan and Virtual Court for Traffic

Guwahati, November 13, 2020: In a high profile function held in the Assam Administrative Staff College premises yesterday, the Hon'ble Chief Minister of Assam Shri Sarbananda Sonowal launched the NIC-developed eChallan and Virtual Courts online applications for the Assam Police and the Gauhati High Court respectively in the physical presence of the Hon'ble Justice of the Supreme Court Shri Hrishikesh Roy, the Hon'ble Chief Justice (Acting) of Assam Shri N Kotiswar Singh and his colleagues from the Gauhati High Court Justice Shri Manas Ranjan Pathak, Justice Shri Manojit Bhuyan and Justice Shri Suman Shyam, the Chief Secretary of Assam Shri Jishnu Baruah, IAS, the Director General of Police Shri Bhaskar Jyoti Mahanta, IPS, The Commissioner & Secretary, Home and Political Department, Assam, Shri GB Tripathi, IAS, the State Informatics Officer of the NIC Assam State Centre Smt Suchitra Pyarelal, along with many other dignitaries.

Also, present through Video Conferencing were the Hon'ble Justice of the Supreme Court Shri Dhanajaya Y Chandradhud who is the Chairperson of the SC E-Committee, Secretary Department of Justice Shri Barun Mitra, IAS, and Director General NIC, Dr. Neeta Verma. Justice Shri Chandrashud spoke at length on the ICT initiatives in the judicial sector of the Country and how NIC has been working shoulder to shoulder with them. The NIC Assam team comprising Senior Technical Directors Shri Diganta Barman, Shri Rubaiyat-ul Ali, Shri Sumitav Saikia and Technical Director Shri Bibhujjal Bhattacharjya were present on the occasion.

Assam is the first state in the eastern part of the country to have implemented eChallan and Virtual Courts for Traffic. eChallan has now been launched only in the pilot police district of Kamrup Metro and will be replicated in the other districts of the State in two phases.

Speaking on the occasion, the Chief Minister lauded the initiative and said that it would bring in greater efficiency and transparency in line with the wishes of the Prime Minister of India. He congratulated the Gauhati High Court, the Assam State Government, the Assam Police and NIC Assam on the success. The Hon'ble Chief Justice of the Gauhati High Court appreciated the crucial role played by NIC in the success of the project; the Director General of Assam Police said that NIC along with other agencies worked very effectively to enable the launch within a very short period.

- Kavita Barkakoty, Assam

NIC, Akola is the Winner of SKOCH Silver Award

NIC, Akola is the Winner of SKOCH "ORDER OF MERIT" and SKOCH SilverAward of Technology in SKOCH Awards 2020, in the 68th SKOCH Summit virtually held on 30th Nov. 2020, with the theme "State of Digital Governance" for the initiative "Framework for e-Governance of fundamental resources Electricity, Water"

Dr. Neeta Verma, DG, NIC was awarded with 'Elets Awards of Digital Excellence'

Dr. Neeta Verma, Director General, NIC was awarded 'Elets Awards of Digital Excellence' under the category 'Digital Governance' for providing Digital Governance during COVID-19 Pandemic, at the 10th Elets Knowledge Exchange Summit & Awards organised by Elets Technomedia.

Elets award for speech to sign language converter developed by NIC, Chhattisgarh

Speech to Sign Language Converter developed by NIC, Chhattisgarh has won the E-lets Award for Digital Excellence under the category 'Digital Innovations'. Dr. A.K. Hota, SIO, NIC, Chhattisgarh received the award in the virtual Elets Knowledge Exchange Summit and Awards 2020 on 11th December 2020.

Speech to Sign Language Converter is a tool developed for improving communication to persons with hearing and/ or speech impairment. Such persons use 'Sign Language' very comfortably. But a majority of the masses do not know sign language. After the enactment of the Right to Education for all, Divyang children are to be taught in the normal classes, as a part of inclusive education. But, many teachers, due to lack of sign languages are unable to give simple instructions to such challenged children. The awarded tool would first convert Speech to Text, and then the text is translated to Sign Language.

Using this tool, teachers can speak on the microphone of the mobile and displaying the smartphone screen to Divyang children. Sign language is different for different natural languages and also it varies from region to region. Hence, the tool has been built first for Hindi for the Chhattisgarh state.

The work is in progress to develop a model to convert Sign Language to Speech. This idea has won the second position in AI Ideathon 2020 organized by NIC.

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